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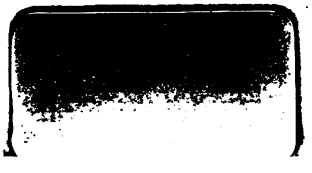

"There the rifted mountains stand—
Portals of a mystic land;

"There the deep, inviolate woods
Lift their shadowy solitudes;

"There lake-water weaves its smiles
Round unnumbered Happy Isles,

"And the northern planets shine
Low-hung o'er the singing pine."

—The Summons.

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COMING TO THE CALL
From the Painting by Carl Rungius

The Camper's Own Book

FOR DEVOTEES OF TENT AND TRAIL

Second Issue

With Contributions by

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PREFATORY

THE kindly reception accorded the first issue of the CAMPER'S OWN BOOK (1912) and the commendatory words of press reviews and personal letters have led to the publication of this our second annual number. Our general plan of contents remains the same. We have gathered together a series of authoritative articles on various phases of camping and outdoor life, each article by some well-qualified writer. The practiced camper and the veriest tyro can alike gain suggestion from these pages.

The editor has in all cases encouraged contributors toward individuality in both thought and expression. In this way only can such a book find its fullest value. From some of the opinions expressed you may possibly differ, but they are all the result of actual experience. Hence they both instruct and stimulate.

As heretofore, our illustrations have been chosen for appropriateness and beauty. The photographs from which they have been taken represent the highest achievement of modern photography applied to camp scenes and the wilderness landscape. For this issue

the number of these illustrations has been largely increased. The frontispiece is from the brush of Carl Rungius, and is here used by his express permission.

Special thanks should be returned to Mr. C. J. Greenleaf and Mr. W. S. Carpenter for photographs loaned. The editor also desires to make particular acknowledgement of the courtesy and assistance of Mrs. Luther H. Gulick, head of the Camp-Fire Girls movement; Dr. J. W. Achorn and Dr. E. T. Forbush; Mr. J. A. McGuire, editor of "Outdoor Life," and the publishers of "Leslie's Weekly," who so freely placed at our disposal a considerable amount of their copyrighted material; and chiefly Mr. George Gladden, who has by his expert knowledge constantly aided the Editor and contributed a novel and pointed study of the beneficial effects of real game protection.

G. S. S.

The Fallacy of Roughing It

By

OLIVER KEMP

IN the quest for rest and recreation, it too often happens that the seeker is one of those misguided individuals who feel that there is no supreme pleasure to be found except in the remote regions of whose existence a few of the hardy ones tell.

He wants a peep beyond the ranges. He wants to explore the untrodden places, to match his strength against the wilderness and take his place by right of conquest, as did the hardy *coureurs-des-bois* of long ago.

The tales of adventure and hardship move his sporting instinct and he longs to pit himself against the wilderness; to feel that in his veins the blood runs red.

So, in fancy, he slings his pack or shoulders his canoe and is off to the land where romance lingers, where the rivers are unmapped, where the caribou are swinging free and the smokes of lonely trappers go up to the skies. Mountain or plain, they call to him alike and please him with the sound of unaccustomed names: Moose Factory, The Land of Little Sticks,

Peace River. The glittering peaks of unnamed, snow-capped mountains attract his eyes, and sheep, goats, elk and silver-tip come into the calculations. The miles that stretch between are dimmed, but glowing with mystic colors; the pictures conjured up in imagination loom big. Across the view there pass the silent, smoky Indians of the North Land, the click of shod canoe poles reaches the ear, the pungent odor of the wood smoke is like incense to the nostrils.

Always, too, there rings the magic of the outfit, and pack trains and saddles, snow shoes and dog trains, moccasins and duffle no end. And always there stretches away the long, luring trail, with the Red Gods beckoning at the end.

Not all who hear the Red Gods call are prepared to answer, and he who without physical preparation starts out upon a long hike, is very apt to find himself in serious difficulty. The difficulties will increase as the days pass until they blight your very soul and, far from hardening you to meet the next one, simply make it less possible to battle with the conditions, until, worn out and tired beyond words to express, one reaches home at last, to find there the rest and recreation from which he ran away.

It is important, therefore, that a man should under-gauge his capabilities and plan such a trip as will bring greater returns in health and pleasure than in hardship and toil.

It seems so easy to adjust a tump line and swing a pack, but your guide has been doing this for the greater part of his life; his muscles answer the accustomed call, and, besides, he adds the important little tricks of "know how." This will be burned into your back, as

well as in your memory, on the first warm day, when the trail leads over rocks and blow-down, when there is no breeze blowing, and the flies and mosquitoes settle down upon your helplessness.

Mosquitoes? Yes, or even one or two decently muscular flies will complete your utter misery. Their insistence is maddening and, while they buzz before your eyes, they light always in some inaccessible spot, and to fight one will consume more strength and prove more harassing than a solid day's work on a portage.

It seems the canoe must be carrried more often than it is paddled. It balks one's efforts to get it through the brush with a persistence that is amazing. All the tornadoes of a century past have conspired to throw the uprooted trees across your path, and bogs and swamps of preposterous areas have intervened.

Blistered hands, stone-bruised feet, a thousand little things make up the annoyances of the long trail, where a certain definite point must be reached in a certain definite time. Then, having achieved the ultimate place of your desire, must you turn about and start on the back track to make home on a certain date?

What opportunity has there been for fishing, for enjoying a really good camp, for going on a hunt and following it with real zest and pleasure? If you are going for sport and recreation, you will never bring home the bacon that way, for God hates a shirker, and on the trail you must buckle down and you must do your share. Otherwise, you will soon find yourself running behind your schedule, and to keep to schedule soon becomes a mania, an obsession. The work it involves is heart-breaking to the unaccustomed *voyageur*

and is no simple task for the hardy ones born to the trail. Wearily you look about you.

Is this, indeed, the land of your desires? Day after day you have toiled through scenes that were much the same. The barren 500 miles nearer home was no different physically from this Land of Little Sticks. The Trading Post is but a counterpart of those passed on the way in; the lakes are much alike.

As you turn to the back trail and contemplate the weary miles between, you are not certain that the Red Gods were calling you. Big and fresh is the memory of the blighting portages that must once more be endured. You are not even certain now that you hear the call of home.

Solace yourself with the thought, if there is any comfort in it, that you have been to Rupert's House, have dipped your blade in the Cadotte and can tell of them as the hasty Continental traveler tells of Paris and Berlin and Venice and the Alps.

And no one loves a quitter. There is nothing left to do but to follow on to the bitter end, and always there is work, and work, and work. Certainly one must work to achieve even pleasure, but the toil involved, sticking to schedule order on the trail, is out of proportion, and there is no joy left in life. It is a long way from rest and recreation.

* * * * * * * *

Why seek the utter ends of things, when you are likely standing on the jumping off place? Is the fishing or the hunting good where you are? Then why not leisurely set up a camp and explore from day to day the forest and the streams about you? All the prob-

lems of woodcraft will confront you here. One does not have to travel great distances to find them.

Of course, if the question of money does not interfere and guides and outfit are not a consideration, one may undertake a "personally conducted" journey to almost any point and practically without great discomfort. It is purely a question of guides, and they simply take one through as so much baggage.

For the strenuous soul, however, there seems to be no joy at all unless, in emulation of some of his book and magazine heroes, he faces the perils of the wilderness with scanty outfit and less experience. He steps from his office door, smiling with satisfaction and begins his journey, hoping in his inmost heart for some adventure to befall, upon which to hang his story of a hardy soul, undaunted by perils and discomforts, who forces Nature herself to yield to his woodcraft and power. And his story?

He it is who sleeps upon the unyielding rocks, with only the blue sky and the stars above him, who never settles his pack for an instant's rest on the longest portage, who pushes his canoe into the teeth of the worst storm of years. Wind, rain or snow—he is not deterred; he glories in the battle. Famine has no terrors, and he exists for protracted periods on the rind of a single slice of bacon.

He is the real tough man, and regales his wonderstruck and admiring friends through many a winter's evening with the tales of his prowess. Let no one dare to doubt him.

But there are others of us who have a month or six weeks in which we want to get back to the wilderness because we love it, because we hope for experiences

that will distract our minds from the cares of the preceding months of work. We want an opportunity to cast our flies over pleasant waters and try out the new wrinkles. We want an opportunity to paddle our canoe leisurely at times, to steal up close to the heart of Nature and have a real look inside. If remoteness is a factor, we take up our maps and, with such assistance as can be easily supplied by many of the sporting magazines and railroads, we decide upon a hike which may be easily accomplished in a week or ten days.

On our way in we carry enough food for the entire trip and the things to make us comfortable. Not too much, of course, but enough.

There is no hurrying along the trail when we are tired; we rest and camp where the fancy strikes us. Should the fishing or hunting not prove up to our expectations, we strike camp early some morning and move along leisurely again to the next likely spot.

Then, before our time is half exhausted, we hit the back trail and move slowly homeward. In the interval there have been strenuous times enough and adventures no end. The setting up of a comfortable camp has become a source of pride. You have learned the holes where the big trout hide; you know the runways of the game. Perhaps it has rained for half the time you were out; then you have come to know your resources for enjoyment; the question of fires has been solved.

You have found the way to build a flapjack, to cook a trout, to broil a steak. The canoe is no longer a thing of perversity, land or water you can handle it. You can manage a pack saddle and throw a hitch that will hold the load. You can negotiate the alti-

tudes without fatigue. You can listen to the music of running waters and hear the voices of the tree tops.

Through it all you have been gaining physically; until now the routine and the work are no longer arduous. You have gained a capacity for enjoyment. The days slip by with adventures no end; the hardships are reduced to a minimum, the discomforts are met philosophically. Off in the distance the worries and business cares have dimmed and taken their proper perspective. You are resting.

Suddenly, in the midst of things, there comes a conviction that it is time to pull stakes for home. You are content. Not far off, by easy stages, is the railroad, and presently you emerge from the shadow of the forest and throw down the dunnage on the little station platform, but you are not tired; you could have sacked it for a long distance yet without fatigue. Sunbrowned and fit, you have had a real vacation; have lived the life of which you dreamed with not a thing missing save the hardships which rational foresight has largely eliminated. You have achieved the first big lesson in woodcraft.

Leave to the pioneer, the prospector, the explorer, the bitter work of the unknown places. If he has given up comforts, it was not because he wished to. If he has had to fight for his life and parry the blows with which Nature guards her inhospitable spots, it is not of his seeking. It is in the day's work to which he brings physical fitness and no end of knowledge of wilderness ways. To him the achievement of his plans is his life work, and every barrier of heat or cold, wind, rain or snow, thirst and famine, must be battered down for the accomplishment of his object.

Over parts of their trails some of us may travel for pleasure, but, if you are a vacationist, the longer trails are not for you. Take off your hat to the veteran.

You do not want to be a make-believe; you want to get the real thing, not a cheap imitation, out there in the woods, on the river, in the mountains.

Taking this point of view, you stand with the real sportsman, who disdains to play at being uncivilized, who goes into the wilderness for the pure joy of living and comes back with the blood running free in his veins and with an outlook on life that is worth while.

Canoeing and Exploring along the Dawson Route

By

WARWICK S. CARPENTER

IT can be stated without contradiction that there are practically no really accessible canoe countries of the first order in North America today which remain not only neglected but nearly unknown. Those which are unexplored by even a few are still harder to find. Last summer I skimmed lightly over such a country. In three short weeks there could be time for only a superficial cruise, and the thickest of the cream had to be left for another opportunity. But, as surveyors would say, the primary control has been laid down, and it promises wonderful surprises in the filling-in.

Perhaps the strangest thing about this unexplored country is that for years the magnificent chain of its largest lakes constituted part of the main highway of commerce between eastern and western Canada, connecting Lake Superior with the fertile acres of Mani-

* Copyright, 1913, by W. S. Carpenter.

toba. Little steamers plied through them, carrying passengers and towing barges, and at all of the portages everything was unloaded and transported across the short intervening distances by teams. Millions of dollars were spent by the Canadian Government in improving the route, until the completion of the first transcontinental railroad, when everything was abandoned. Today an occasional hulk can be located below the surface, and at some of the portages the rusted remains of antiquated marine boilers still rise above the water. But Simon Dawson has gone to his fathers, and the broad reaches of the Dawson Route are stirred only by the birch of some wandering Indian or the occasional prow of a ranger's Peterboro.

Yet my putting-in point was only over night from Duluth, doubtless the home of more canoeists than any other city of its size in the United States. And it was but little farther from Minneapolis, St. Paul, Chicago, and all their thickly populated contiguous territory. The Route can be reached even nearer, at Fort Frances, on Rainy Lake, but I preferred to put in at Windigo, a little flag station on the railroad beyond maintained only for a section gang, and so have what current there was in my favor. Outfitting was done at Atikokan, thirty-six miles west, a divisional point, where engines are changed, and about which a larger settlement has grown up. Except for a mine or two, the stations nearly all exist chiefly to get the trains through. On each side stretches the vast *terra incognita* of western Ontario, hundreds of miles of lake, muskeg and unbroken forest, teeming with moose and all the varied life of the northern wilderness, and with only at long intervals a teepee,

the cabin of a trapper or ranger, or some trader's far-flung outpost.

The lakes of the Dawson Route itself, and the other largest ones, are of course known and mapped, so that one can travel through them with absolute certainty, but in all the country alongside are hundreds of others, miles long, unplotted and unnamed. In most of them are lake trout, muscallonge, pike and pickerel, but here and there is a smaller bass lake, containing nothing but bass, literally swarming with the gamiest black fighters that ever struck a spoon or came to a fly. These are the unmapped lakes, which you may name if you find—and you can't help finding—as alluring to the argonauts of the paddle as the golden fleece. And they are but a round of the sun from the liveliest canoe clubs of the continent, though many a flaming sunset will go down behind the tall ranks of the Norways and white pines between Windigo and Fort Frances.

The Ontario Government has just recently set aside almost this entire territory as a park, known as the Quetico Forest Preserve, and has prohibited hunting forever within its confines. There is probably not another place in either the United States or Canada where more moose can be seen, and they are now assured of preservation for all time. One comes upon them unexpectedly around the bend of a stream, or from behind a jutting point along the shore of a lake. With some strategy they can be headed off from shore, when they stand far out in a shallow bay where lily pads and rushes grow thick, and so be made to take to the deep water. A little stiff paddling will then rapidly overhaul them and pictures can be taken

within six feet. I saw actually hundreds on the route described below, so many that I lost count, and photographed many of them. Naturally the best time to find them is in the height of the fly season, during the latter part of June and the first half of July, but a more comfortable and enjoyable trip would be made toward the end of July and the first of August. This is not too late for moose. The most delightful time of all is still later in August and early in September, but then the moose will be wilder and less in the water. One will see a number of red deer and an occasional bear and caribou, but the moose are the prime attraction, outside of the alluring lakes and the pine forests.

Already the rangers assigned to the Preserve have cut out and marked with fire signs the portages along the main waterways and have begun the erection of small cabins at different points, preparatory to a complete system of patrol. The byways of the Preserve, however, are still untravelled, save by Indians, and it will be several years before they are thoroughly searched out. It is planned that the country shall forever retain its character of a primal wilderness, and so constitute another link in the chain of national parks which are to hand down to succeeding generations something of the wealth of the wild that is passing. To the campers of the immediate future it will have the added charm of the unexplored.

The maps of the Canadian Geological Survey, which can be obtained from Ottawa, will show the main routes, and the Canadian Northern Railway has issued a blueprint map on a larger scale. It is quite feasible for experienced canoeists to go anywhere along the mapped courses without a guide. If they

Photo by W. S. Carpenter

STURGEON LAKE, QUETICO FOREST PRESERVE

Photo by W. S. Carpenter

QUETICO LAKE, QUETICO FOREST PRESERVE

venture aside, however, they must know enough about wilderness travel to find their way with precision. Guides who really know the country, even on the main routes, are as yet nearly impossible to find. But with the maps, any good bushmen or Indians will be satisfactory. They can be picked up at Fort Frances or Port Arthur, but elsewhere only with difficulty.

Leaving the head of Lake Windigoostigwan, near Windigo, one passes on the right, a short distance down the lake, some high rocks, near the top of which the stone has been naturally worn away until it has the semblance of two eyes, a nose and a mouth. This is believed by Indians to be a windigo's head, and Lake Windigoostigwan, *The Windigo's Head*, is named from it. The lake was very badly burned about ten or twelve years ago throughout almost its entire length, but poplar and Jack pine are coming slowly back. At present, however, it has a bare and desolate aspect, and is accordingly one of the least attractive portions of the trip. But this is certainly discounted by its being the first lake to launch upon, whose long reaches look inviting enough, spite of the bare shores. It is a good first day's paddle down Windigoostigwan, not too hard, and beyond, on French Lake, are the headquarters of the preserve, so that one leaves civilization by a process of tapering off. The portage from Windigoostigwan to French Lake, however, is the most difficult of the journey, two and a half miles long, though not otherwise hard.

The camp of the Park rangers at French Lake is very attractively located. It is at the end of the portage, in a very pretty little grove, from which all the undergrowth has been cleared. There is a log cook

house finished, and the latter part of last June a large living house was well along toward completion. This is to contain the sleeping quarters of the rangers, a large main room with fireplace, and the office of the superintendent.

There is another route to French Lake than by way of Windigoostigwan, which is much used by the rangers. From Kawene station there is a portage of two and one quarter miles to Eva Lake, then a paddle of seven miles through Eva Lake, followed by a portage of one mile to French Lake. I did not go over this route, but believe that the entrance by way of Windigoostigwan is easier for canoeists.

French River, above the point where it flows into French Lake, is an excellent place for moose. From French Lake the way is down the French River into Pickerel Lake, and this also is good moose country. Just before reaching Pickerel Lake there is a long slough opening off to the right, toward the north, in which were several. It is an ideal place for them. Some of the bays on Pickerel Lake are equally good. In fact, one is perfectly certain to find moose in abundance wherever the water is shallow and there are rushes and lily pads over an area large enough to make good feeding.

Shortly after entering Pickerel Lake the shores approach to form a narrows, and on the southern side, around the point, is the most beautiful grove of Norways that I found. It is well worth paddling over to see. In the center is the grave of an Indian child, lying alone under the towering, clean-boled pines.

At the foot of Pickerel Lake is Pine Portage, where formerly was a Hudson's Bay Company post. The

grassgrown mounds where the walls stood are plainly visible and in the water are the remains of a Dawson Route steamer. The Dawson Route goes over Pine Portage and into Doré Lake, and thence by another portage into Deux Rivières. There are moose galore along Deux Rivières and it is an excellent place to get photographs of them, as the river is winding and narrow and there are plenty of opportunities to steal up on them. The head of Sturgeon Lake, at the mouth of the river, is even better. There are quantities of grass and lily pads around its shores and in the late afternoon a dozen or more moose will be in sight at one time.

Sturgeon is an interesting and beautiful lake, narrowing and contracting for some eighteen miles. But instead of following it throughout, we chose to make a long detour, going back by way of Pickerel Lake into Batchawaung Lake, and thence through many others to the foot of Sturgeon, making almost a complete circle. The map indicates a trail into Batchawaung. We did not take this, but continued along to a point where a stream is indicated. Pine Portage is marked on the Geological Survey map by the same kind of a line, but there is no stream at Pine Portage, the trail going up over a good rise before it drops down again into Doré. Between Pickerel Lake and Batchawaung there is plenty of water, although the passage is very narrow. It had been obstructed by fallen trees, but these had been chopped out by rangers. In the narrow part of Pickerel, before running into Batchawaung, the Canadian pickerel—American pike—were striking eagerly and we caught a number. The water in Batchawaung is very noticeably colder than in

Pickerel, and though we did not fish there, it is in all probability a good place for lake trout.

From Batchawaung the portage ran over a gentle rise to McAlpine Lake. McAlpine Lake is very beautiful, its narrowness accentuating the rise of the shore line. The shores are quite rocky, with some rather steep points, and very little marsh. There are accordingly few moose. Though by no means a large lake, McAlpine is altogether satisfying in its smaller beauty.

From McAlpine we went down the narrow outlet into Kasakokwog Lake. On the map the portage is indicated as near Kasakokwog, but it is, on the contrary, very close to McAlpine and the greatest length of the river is west of it. The river is shallow as well as narrow, and its bed has many dead heads in it. Trees which have fallen across the current have been chopped out, and the passage, though requiring caution, was not difficult. But this might be otherwise in low water.

From Kasakokwog Lake there is a way out to Atikokan by way of Long Lake and the chain of small lakes to the north, but it is very hard and not at all to be recommended, either as an entrance to or exit from the Preserve. Kasakokwog is only about eighteen miles from the railroad and there has been some lumbering along its northern shore, down to the boundary of the Preserve. The logs are driven through the outlet, rafted through Quetico, and from there sent down through Beaverhouse Lake to the Namakan River, Rainy Lake and Fort Frances, a tremendous journey for lumber, the making of which already well justifies the careful preservation of the Park. Accordingly,

for a short period, on Kasakokwog and Quetico, one is almost within touch of civilization again.

Quetico is in many ways more beautiful than McAlpine, being larger and more imposing. The shore line is irregular, with numerous bays, and the lake is not so wide as to be monotonous. There is a small ranger's camp on the southern end of the large island west of the point between the two long arms of the lake. It is beautifully situated in a fine grove of Norways, facing the east, and commands both of the two great arms. From here the way lay down the south arm of the lake to Jean Lake, which is reached by two short portages.

Jean Lake is the most attractive one that I saw. It is wide enough for extended prospects, but not so large that opposite shores seem flattened out. Dense forest comes down to the shore on all sides, and there is a flavor of wildness and seclusion greater than on any of the others through which I had yet passed. Rangers whom I subsequently met commented of their own accord, when they learned that I had been through Jean Lake, on its unusual beauty. They also said that it is full of lake trout. Both Quetico and Jean Lakes would be ideal places for a permanent camp of several weeks, from which to explore surrounding country.

Jean Lake flows into Burntsides, called Budsides on the Geological Survey map, through a small brook which has to be portaged around. The portage is well marked and very easy, about five chains long. Burntsides has been burned almost all around, but is now surrounded by a very vigorous young growth. I had been told that there is a route through Burnt-

sides and down the Clear Water Over Sands River into Sturgeon Lake. This is not indicated on either the Geological Survey map or the blue print map, but I nevertheless decided to try it in order to avoid the long portage to Lonely Lake. After much searching, the way out was located, east from the end of the portage from Jean Lake. There is a narrow channel, opening from behind a point and not visible until close up, which led into a large part of the lake not shown on the maps. Immediately after clearing the channel the route turns southeast, keeping on the southerly side of islands, to another narrow channel. This second channel is marked by a ranger's fire sign. The lake from here on, for some distance, is quite narrow in places, and again expands to a considerable width. It can hardly be called a river, though it is much like one in spots. It makes several turns and finally appears to be about to open out into a larger body of water. It is here, on the left hand side, that the Clear Water Over Sands River flows out. There is absolutely nothing to indicate it in the shore line, as it goes out over a little falls and is very narrow. From the opposite side it would be missed entirely were it not for a fire sign on a tree. I found signs at both ends of nearly every portage crossed, and usually they indicated from a distance where the portage lay. There are many of them along the shores of lakes where there are neither portages nor campsites, and this one at the falls looks from a distance like such an instance. As rapidly as the rangers open up new sections they post signs, and one who does not wish to explore on his own account can follow these markers of the trails.

The portage around the falls where the Clear Water Over Sands goes out is an easy one, well cleared, of about a hundred yards in length, Below it the stream is very winding and narrow. Both banks are swampy for much of the way and covered with tall grass and bushes. The river is shallow and somewhat sandy, but the water is not particularly clear, having a very slight muddy cast. The stream is very wild in flavor and of an abandoned beauty which constitutes one of its chief charms. There is a second portage of about fifty yards immediately below the first, made necessary by a shallow rapids. It is extremely easy. Below this is still a third portage of about a hundred yards. This also is easy, although it is necessary to wade some distance out over small stones to get water enough to float the canoe. Below the third portage is a rapids which is too shallow to ride through. Stones have been removed to make a channel and the canoe can be floated through by wading beside it and guiding it carefully.

The general course of the Clear Water Over Sands River is southwesterly and it flows into Sturgeon Lake near the lower end, where a bay spreads out northwesterly to make the widest part of the lake. Farther down Sturgeon, in the very northwestern corner, is a long, narrow bay, which opens the way to a number of unmapped lakes, some of which are bass lakes. Crossing the Maligne Portage, at the outlet of Sturgeon, one can turn southeasterly, over the portage to Pooh-bah Lake, and thence on to the second small lake beyond Pooh-bah, which is also alive with bass. In all the blank spaces of the map are hundreds of these little lakes, more intimately and appealingly

beautiful, because less imposing, than the large lakes, and irresistible to everyone who loves a good fighter at the end of his rod.

The Maligne River belies its name. It is slow moving and benignant, with few rapids, and those easily run or carried around. After crossing Lac La Croix, however, the Namakan is more treacherous. There is an Indian village at the point where it leaves the lake, and if one is not thoroughly experienced in running strange rivers, it is wiser to engage a guide as far as Namakan Lake. Instead of going all the way down Namakan Lake to Kettle Falls, at the head of Rainy Lake, it is better to take the easy portage from about the middle of the north shore, as shown on the Geological Survey map. A steamer leaves Kettle Falls for International Falls and Fort Frances twice a week, on Saturday and Tuesday mornings, and it is best to take it for the forty-six mile trip, as one is frequently wind-bound on Rainy Lake, or liable to be caught on its broad reaches by a sudden squall.

There is another good route from the upper end of Sturgeon Lake down through Chatterton, Keats and Shelley Lakes, which are very beautiful, through Agnes into Basswood, and thence along the International Boundary westward to Fort Frances. The portages are all marked along the main course, but they are rather steeper and rougher than those on the routes given above. They lead to higher and colder waters, however, and to surpassing lake trout fishing. But every compass direction in Quetico points to good fishing, and perhaps the best yet is just over the neighboring ridge in some unchristened lake.

The Art of Dry-Fly Fishing

By

EMLYN M. GILL

SOME wise man has said that fishermen are born, not made. That feverish craving that comes, in the early springtime, over those who have been anglers from their boyhood days is something difficult for the uninitiated to understand. Nothing can satisfy this irresistible longing but an early trip to the streams, lakes or sea, the choice depending entirely upon the particular branch of the sport that has taken strongest hold upon its victim.

Some, whose tastes and desires are simple, find ample enjoyment in taking from the bottom of the sea or the salt water estuaries the ever-hungry flounder, which makes but faint resistance as it is forcibly hauled into the boat by its captor; others think the luring of the common blackfish or tautog, which, when hooked, makes a few powerful lunges to regain its rocky home, sport fit for kings; while large numbers of anglers, still more ambitious, find much sport in fighting, with light tackle, the beautifully marked

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weakfish, which in early summer visits our shores in enormous schools. And then the bluefish! The joys of a day in a small sailboat, bounding over the waves of the deep blue sea, trolling for this savage fighter, mark the highest ambition of many an angler; and the capture of a striped bass, whose fighting abilities are often compared to those of a salmon, is a feat not to be scorned by even the most dilettante of sportsmen, especially if his tackle be light and fine.

But the highest type of salt-water fishing is the taking of the giant tuna and tarpon, both tremendous fighters, upon the light tackle adopted by the Tuna Club of Catalina and the tarpon clubs of Florida. A contest between a man and one of these gamy, heavy fish is, indeed, a battle royal, attended at times with some danger, and the capture of an unusually large specimen marks a never-to-be-forgotten epoch in the life of the fortunate angler.

Fresh-water fishing also supplies delights and allurements that its devotees consider in no way secondary to hunting the mightiest of salt-water fish. To the seeker after the tarpon and the tuna come the enjoyments of being on the vast expanse of the sea, with all its dangers and excitements, and the battle with heavy antagonists, requiring at times untiring strength and skill. But the joys of the angler of the streams and lakes are often quieter, though fully as intense, and in them the manifold charms of nature play a most important part.

Far removed from the turmoil of the city and the excitement of its surroundings, the angler for trout or bass, upon the banks of a stream with surface here smooth and placid, there rough and turbulent, finds an

indescribable enjoyment in his solitude and in the manifold attractions of nature presented in endless variety to his eyes. Dr. Van Dyke has said that "a river is the most human and companionable of all inanimate things." In place of the salt-water angler's exciting battles with the fish of the sea, the pleasure of the trout fisherman comes amid quieter surroundings, and his game is one of finesse and judgment, in which, with the lightest of tackle, he matches his skill against the cunning of that most wily antagonist, the trout.

While fishing for fresh-water bass, both small-mouth and big-mouth, furnishes an immense amount of sport to anglers in nearly all parts of the country, it is undoubtedly true that fly fishing for trout has held a place in the affections of its devotees, and also in angling literature, for more than two centuries, that can never be replaced by any other method of angling. The principal pleasure to be derived from its practice is not the heavy creel at the end of the day's sport, but the very attractions of the game itself. In much-fished waters, where the trout are scarce and very shy, the utmost skill is required to present an artificial fly in such a manner that the fish is completely deceived and takes the artificial lure without suspicion that it is not about to enjoy a repast upon one of nature's dainties.

In discussing the various methods commonly used by fly fishermen, it is necessary to divide trout into two classes—those that are caught in wilderness waters, where they are seldom visited by an angler and therefore are unfamiliar with his lures, and those inhabiting streams nearer civilization that are constantly fished day after day in season and whose trout become ac-

customed to the sight of artificial flies of all descriptions. In these streams trout become "educated" and most difficult to deceive. The wilderness trout, unaccustomed to the wiles of sportsmen and in keen competition for food, fall easy victims to almost any pattern of gaudy flies, tied with silks and feathers of brilliant hue and frequently made without intention of imitating either insect or other living creature. Some of the flies most commonly used for this style of fishing are the Parmachenee belle, invented by the late H. P. Wells to imitate the bellyfin of a trout; the silver doctor, a lure with a bright silver body and wings of fancy feathers; the royal coachman, professor, Montreal, red ibis, grizzly king, and others, all without living counterpart in nature.

Nor are these flies, as a rule, presented to the fish in a manner in which they would reach it naturally. A weak, flying insect of any kind would be utterly unable to swim against a heavy current, and yet in this style of angling the lures described are often cast downstream and pulled upstream against the current by a series of jerks, or thrown across stream and forced to swim across the heavy flow of the stream, apparently against great odds. These flies are known as wet flies or sunken flies, for when cast upon the stream they immediately sink beneath the surface. The belief is held by many that wet flies, presented in the manner described, are not taken by the trout for winged insects, but for minnows or other small fish.

About the middle of the last century a Mr. Pulman made a discovery that has revolutionized the methods of fly fishing on the celebrated chalk streams of southern England and which bids fair to have a potent

influence upon American angling. He realized that, while trout at times were accustomed to feed below the surface, eating the larvae or nymphs of aquatic insects, yet frequently their favorite food seemed to be winged insects that had emerged from their larval state and which, with wings erect, floated on the surface of the stream. So Mr. Pulman advocated the use of a floating fly, to be cast upstream and allowed to drift down with the current over the feeding fish. And from this beginning came that great school of English dry-fly fishermen, whose ranks embrace nearly all of the most expert fly fishermen of England and who use the dry fly exclusively in their angling for trout.

To the author, who for several years has been a dry fly enthusiast, this manner of taking these cunning game fish seems the most logical, the most natural and most successful, under many conditions, of all known methods. It truly "holds the glass up to nature" and presents an imitation winged insect to the trout in the only natural way in which it can be presented. In fact, the whole theory of dry-fly fishing is based upon exact imitation of nature. The flies are tied to resemble a natural insect—generally one of the duns of the family of the *Ephemeridae*—in size, shape and color; so far is the exact imitation theory carried that counterparts of both the male and female insects are made, the slight differences between them being clearly shown by the skillful fly-tier. As the duns are small, with the exception of the May fly, August dun and one or two others, so are the imitation dry flies minute and tied on very small hooks. They are made of materials that will not absorb water readily, and, to increase their floating capabilities, the angler anoints

them with paraffine oil. Not only must these flies be tied in exact imitation of natural insects, but their action upon the water must resemble the action of the living fly. The only motion that one of these insects, among the most frail of nature's creatures, can have upon the surface of a stream is that naturally imparted by the current. So the dry fly must be cast upstream and allowed to float down wherever the current takes it.

This most fascinating method of fly fishing has been well known in England for sixty years or more and has become almost the sole method of taking trout from many of its celebrated trout streams. Little has been known about it in America, and many anglers, having heard that it was a scientific method invented for use on English chalk streams, rivers of gin-like clearness and with gently flowing currents, have thoughtlessly come to the conclusion that it was not suitable for American streams, in which the currents are frequently strong and turbulent. In fact, it has often been dismissed as merely an English "fad."

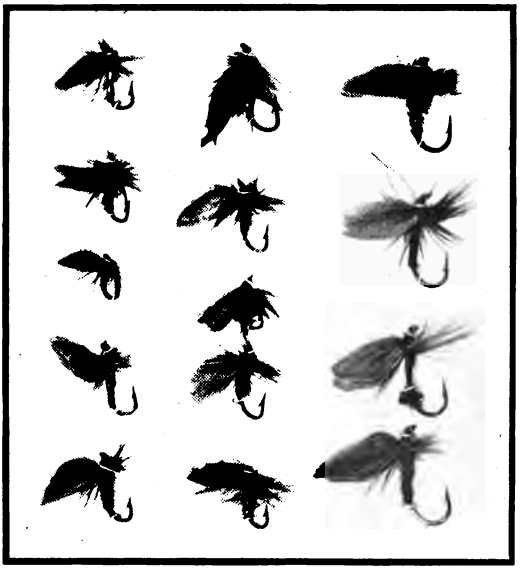
But is it not reasonable to suppose that an exact imitation of a fly upon which a trout has been accustomed to feed, floating over it precisely as it has seen all other insects approach it, would be greedily seized by any feeding fish, whether its habitat was in English streams or in American waters? In fact, it is needless to argue this question, for a comparatively few American enthusiasts have used dry-fly methods for years on many streams and have succeeded in taking trout under conditions in which the wet fly would prove to be entirely unavailing. In early spring-time, when the water is high, turbulent and often discolored, the

user of the wet fly finds his most favorable conditions and gets his big bags of trout. But when the streams have gone down after the spring freshets are over and the water has become low and of crystal clearness, the user of the sunken fly is often in despair and frequently passes many days on the streams without taking a trout of respectable dimensions. These are the conditions most eagerly welcomed by the dry-fly angler.

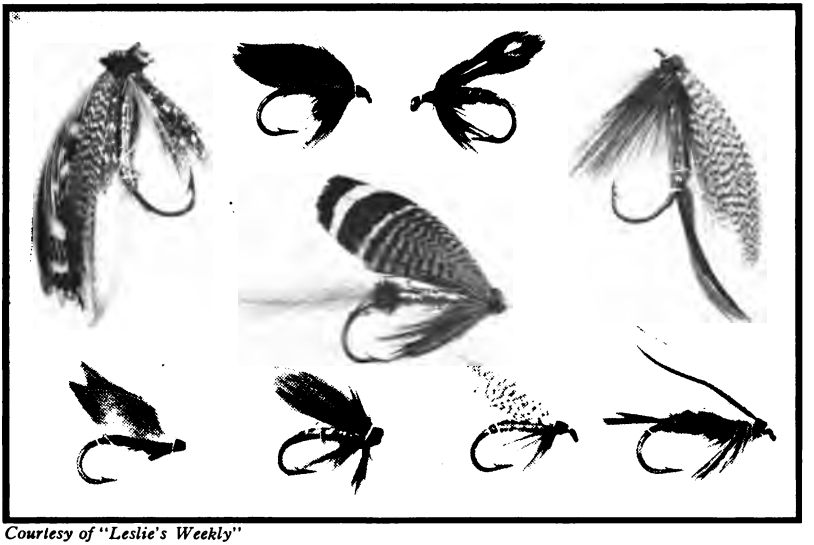
Fishing upstream, he approaches a trout from behind —for all fish lie with their heads facing the current— and allows his tiny dry fly, tied to a gossamer leader, to fall gently upon the surface of the water. There is no splash or anything else to startle the trout. The lure floats gently down over the fish and is at once taken, if the trout happens to be in a feeding mood. The English dry-fly "purist," as he is known, fishes only the rise; in other words, he remains upon the banks until he sees the rise of a trout on the placid surface of the stream stretched out before him. He then "stalks" the fish. Carefully approaching to within casting distance of the rise, he throws the fly so that it falls gently upon the water on the spot where the rise took place or slightly above it. He then waits until he sees another rise before again wetting his line. But an angler might pass many days upon some of our American streams without seeing a good-sized trout rise to the surface; so American anglers "fish the stream," casting wherever their judgment or angling instincts tell them that there may be a trout worth while taking. The author might relate many instances of success with the floating fly upon American streams, where under the same conditions the wet fly seemed utterly powerless to lure the wily trout.

While, as a matter of fact, a wet-fly fisherman need not go to the expense of buying a new outfit, with the exception of flies and possibly leaders, to practice the art of dry-fly angling, yet I will describe briefly the tackle best suited to this mode of fishing: The rod should have considerable backbone and not be weak or whippy; the line should be of waterproofed silk, heavier than the line ordinarily used in wet-fly fishing, and should be tapered at both ends; ordinarily the leaders should be nine feet long and tapered from a heavy leader at the line end to the finest of undrawn gut at the end to which the eyed-hook is attached. But a single fly is used. Upstream fishing is the method adopted by all dry-fly anglers. The fly, cast upstream, is allowed to float down with the current, while the angler carefully strips in with his left hand the slack line, being careful, however, not to exert any pull upon the fly. After the fly has drifted down a short distance, it is carefully lifted from the water and another cast is prepared for. Unlike the method of casting with the wet fly, in dry-fly fishing, the fly is not allowed to touch the water until it has reached the exact spot picked out by the angler, and the line is always lengthened by means of false casts or casts in the air. Between casts, also, the fly is whipped back and forth in the air a few times to rid it of superfluous moisture; in other words, to dry the fly.

The writer strongly advises all beginners with the dry fly to fish all good water carefully and not to attempt to see how much of the length of the stream he may cover in a day. "There is no surer sign of an unaccomplished dry-fly fisherman than hurrying," says a celebrated expert. If the angler comes to a spot that



DRY FLIES
The right-hand row shows some of those used in this country.
The others are English.
(Exact size)



Courtesy of "Leslie's Weekly"

AMERICAN WET FLIES
(Exact size)

(Left to right) Salt-Water Reel, Leader Book, Wet-Fly Books, Leather Box, Tournament Reel Light Trout Reel.

A GLIMPSE OF MR. GILL'S OUTFIT
A FEW TREASURES OF THIS VETERAN ANGLER

Courtesy of "Leslie's Weekly"

(Left to right) Heavy Trout Reel, Three Dry-Fly Boxes and Dry-Fly Oiler, Salt-Water Reel, Case.

he feels must be the hiding place of a good fish, he may to advantage float his fly over this one spot many times, and over all good places he should cast the fly at least two or three times.

One of the banes of dry-fly fishing is what anglers have termed the "drag." There is a well-established theory that if a floating fly has any unnatural motion whatever, a trout will not take it; this cunning fish does not like to see even a live insect perform unnatural feats. It will be readily understood that if a fly is cast up and across stream and lights on a slowly moving current near the opposite bank, while the current in the center of the stream is swift, the line, falling in the swifter water, will be carried downstream faster than the fly would naturally move on the sluggish surface. The force of the strong current upon the line would exert an influence upon the motion of the fly, and an inevitable drag would set in. In order to overcome this, anglers make what is known as the slack-line cast.

Instead of using a barely sufficient length of line to enable the fly to reach the spot where it is supposed to alight, when making the false casts in the air the fly is allowed to go beyond this spot. Before the end of the forward cast, the forward sweep of the rod is retarded or stopped entirely for a moment; the movement of the fly through the air will be checked and a slight backward impulse will follow; then the tip of the rod is dropped, the fly will light gently, and the line, instead of being taut, will fall loosely, in curves or waves, upon the water. A drag may take place under all conditions where there is a difference in the strength of the current where the fly lights and where the line falls,

and the one way of overcoming its disastrous results is this loose-line cast.

The varieties of imitation flies are many, but nearly all are imitations of the duns. For American streams I can confidently recommend the whirling dun or Wickham's fancy, and for late-afternoon fishing, the pale evening dun. Other favorites are the olive dun, iron-blue dun, jenny spinner, willow fly, soldier palmer and white miller, while the old favorite coachman, tied dry, often proves a killing lure.

Whether one becomes such an enthusiast that in fly fishing he uses the dry fly exclusively or uses both dry-fly and wet-fly methods, he will find it profitable, on many occasions, to be familiar with the possibilities of the floating fly.

As the writer has been an enthusiastic fly fisherman for thirty-eight years, it may seem anomalous that, next to casting a fly for trout, his favorite sport is surf casting, where a pole and rod and a heavy lead are used. Much skill may be used in casting this lead, and there is a certain joy in standing or sitting upon a sandy beach, breathing in the salt ozone from over the ocean. Surf casting offers a means of recreation to the over-worked business man of the city that will furnish him a splendid form of light exercise in the purest of air, with now and then the thrill of the tug of a heavy fish.

Medical and Surgical Suggestions for the Camper

By

HARRY C. PHIBBS

1. MEDICAL

EVERY writer of a treatise on any subject starts off with some description of apology for "putting his pen to paper." The majority of excuses tell that no other writer on the subject has fully covered the field, or covered the field in the best manner. My apology is that most writers on the subject of First Aid for the Outdoors are physicians and write from a physician's viewpoint. No matter how simply they endeavor to put their views and instructions, there always seems to creep in a supposition on the writer's part that technical particulars which to him are a matter of first principles should be well known to the tyro. The poor tyro is therefore left guessing on some more or less important point.

The following notes on First Aid are written from the viewpoint of a man who is not a physician but who

has had opportunities of observing the most efficacious treatment of the simple ailments and accidents which are likely to be encountered by the man in the woods.

First, we must take into consideration that only those things which are absolutely essential and very likely to be needed should be carried. Second, that we can only count on doing First Aid work in a serious case of accident or illness; in other words, doing what will be sufficient to enable us to get the patient safely to a point where we can call in the help of a physician. Third, the equipment we carry must be very light and compact and should not contain any liquid preparations.

Now if a man who knew all about it were going to explain a medicine case to the novice, the first thing he would do would be to open the case and show his pupil each thing individually, telling him "what it was for." This is the method (with modifications) which we will here adopt. We have in mind a medicine case suitable for the out-of-doors, and we will list the contents, telling what each article is for. This may not appear as ethical as writing a polished essay on the matter of first aid in the field, but for practical purposes it should be much better. The man who will get up a case on the lines laid down by the writer, can then go over the contents and familiarize himself in a general way with the purpose for which each article is included in the case.

First we take the medicines; of these we have ten. There is no law to prevent your taking more or less, but the ten selected seem to fill the bill for general needs, and here they are:—

Cascara Sagrada:—When a person who has been living in the city, sleeping in a house and eating at a linen-clad table, betakes himself to the woods and the delightful discomforts of eating camp food from a tin platter, this, added to the unusual amount of exercise which he is likely to indulge in, will of necessity induce some changes in the physical condition of the body. The first trouble is likely to be with the bowels. Due perhaps to the change of food, constipation is frequent. Prompt and effectual means should be taken to remedy the condition. It is better to use something to tone the bowel to a normal condition than to use a powerful cathartic or purge. Therefore a reliable preparation of Cascara Sagrada is excellent for the purpose. A pill or "tabloid" of 2-grain strength will be sufficient for a dose, and one taken at night after the last meal will promote satisfactory action. You will find that if the bowels are attended to and constipation is avoided, your chances of enjoying the best of bodily health on your trip are materially increased.

Aromatic Chalk Powder and Opium:—This pill is an astringent, that is to say it is used to stop movement of the bowels, a diarrhœal condition, which is generally caused by some slight irritation in the intestines. Before administering the Aromatic Chalk Powder and Opium (which by the way can be purchased in one pill) a cathartic should be given, this with the object of sweeping out the cause of the irritation. The routine treatment is a dose of castor oil, but as we don't wish any liquid in the case, we can use either Calomel and Sodium Bicarbonate (1 gr. of the Calomel and 2½ grains of Sodium Bicarbonate) or, what is handier still, a tabloid called Cathartic Compound

which is a very excellent purge. One of these administered in a case of diarrhœa will clean out the bowels and should be followed in about an hour with a pill of the Aromatic Chalk Powder and Opium. This will stop movement and give relief.

Cathartic Compound:—Referred to above to be used as a purge. It can also be used wherever a cleaning out of the intestines is needed. In case of acute constipation, etc.

Potassium Permanganate, Gr. 1:—This is a very useful article for disinfectant and antiseptic purposes. Two dissolved in half pint of water can be used for cleaning a cut or sore. One of its greatest uses outdoors is as a drinking-water test. A very small crumb chipped off the tablet and dropped into water will, if the water is pure, color it a brilliant purple. If the water contains any organic matter, and is therefore unfit for drinking, the Permanganate will turn it a muddy brown. If no pure water can be obtained, one Permanganate grain 1 added to each pint of water and let stand for a while, will render it drinkable, however unpalatable it may be.

Permanganate is also the preparation to use in a case of a snake bite. You will know the bite of a dangerous snake by the two fang marks which appear distinct from the half-moon row of the reptile's teeth. In case of snake bite, first of all don't get frightened and don't let the other fellow get frightened. It is the fright that hurts. Act quickly, "jollying" your patient all the time. The bite is generally on the hand, arm or leg, if so bind a tight cord or your tourniquet on the "heart" side of the bite. This is to constrict the flow of blood. With your lancet make two criss-cross cuts

over the bite, cut fairly deep but be careful of cutting an artery. Crush a couple of the Permanganate products to powder and rub them into the wound. Permanganate is an antidote to the snake poison, and will do the work for you. Sucking the wound is sometimes resorted to; if you do this don't be afraid that the Permanganate you rubbed into the wound will hurt you; you can spit it out. Be careful that the rush of blood from your cutting doesn't carry your Permanganate out of the wound. You want it well down into the tissues. The only danger now is that the depressing effect of being bitten will influence the mind of your patient. A stimulant is needed, whiskey or brandy is generally used. Don't give too much of the "fire-water," as it in itself will have depressing after effects.

Alum, Gr. 10:—One dissolved in two ounces of warm water makes an excellent eye wash, when the eyes are red or inflamed, or if a throat gargle is needed, one should be dissolved in one ounce of water for the purpose. This preparation is also useful in the care of the feet. If the feet are tender, dissolve three of the tabloids and about a tablespoonful of salt in two quarts of water; in this bathe the feet, it will harden them up.

Alum is an excellent styptic; if powdered and applied to a cut it will stop bleeding. It can be used to stop an internal hemorrhage if it is from the stomach. One tabloid sucked in the mouth will effect the purpose. It will be of no use in stopping a hemorrhage from the lungs. The blood coming from the lungs is a very bright red while that from the stomach is a very dark color.

Quinine Bisulphate, Gr. 2:—Pretty nearly everyone has an idea of the medicinal uses of Quinine; a dose of it will generally stop a cold in the early stages. One tabloid should be taken with a little water before going to sleep. In tropical climates the taking of Quinine becomes somewhat of a daily necessity, it having the power to destroy the malarial parasite in the blood. When traveling in the tropics, it is therefore necessary to carry quite a quantity of Quinine. In our case, we will carry just enough to serve the traveler in more temperate climates. In case of malaria it should be administered as follows: four or five of the grain 2 Quinine to start treatment and repeat after six-hour intervals for a couple of days. It is important in cases of malaria to keep the bowels clear. The Cathartic Compound may be needed for this purpose.

Salol, Gr. 5:—This preparation is used as an intestinal antiseptic. Its use is indicated in that condition in which a person feels that something eaten is "not agreeing" with him. The eating of over-ripe fruit or other irregularities in the diet often seems to set up a description of fermentation in the stomach or intestines. Ptomaine poisoning also comes under this heading. Such a condition should be carefully attended to as neglect might lead to something as serious as dysentery. The indications are colic or griping pains in the stomach and the treatment five grains of the Salol dissolved in water. Don't spare the water.

Phenacetin Compound:—Phenacetin in some form is generally included in the medicine case. It is used as a treatment for headache, and neuralgia. Some

danger attends the taking of this drug on account of its depressive effects, but these are reduced if it is taken in combination with caffeine in the following proportions; Phenacetin, 4 grains; Caffeine, 1 grain. This can be had in one tablet or tabloid so that no measuring is necessary. The dose is one of the above formulas taken with a little water and repeated after an interval if necessary.

Lead and Opium Lotion:—A convenient compressed preparation of this very useful item in our medicine chest is Lead Acetate grain 2, Opium tincture min. 20, in the one product. One dissolved in half a pint of water makes a sedative application for bruises and swollen parts. In a case of sprain, the above lotion applied to the swollen part first cold, and when the comfort this gives the patient passes off, it should be applied hot. Don't be afraid of applying plenty of the lotion to the injured part. If a man gets a sprain on the trail don't try to fix matters there, but strap or bind up the injured part very tightly and get him to camp for treatment.

Corrosive Sublimate (*Bichloride of Mercury*):—This is a very potent poison, in fact so dangerous in the hands of a careless person that many people would not recommend that it be included in any medicine case which is for the use of the "layman." However, the outdoors man for whom these instructions are written is generally able to take good care of himself, so that we can presume that when he is warned he will be able to take care of a little bottle of poison. There are various tablets of the preparation sold and you should see that directions for making the solution are on the label. The one the writer prefers is a product

of 1.825 grains in each tabloid. One of these dissolved in one pint (16 fluid ounces) of water makes what is known as a 1 in 1000 solution. It is an extremely powerful antiseptic. The absolute value of an antiseptic can only be appreciated by a doctor or a man who has suffered from something which an antiseptic could have prevented. A wound, a cut or a tear from a rusty nail can, as everyone knows, cost a man his life. The safeguard against this is the application of an antiseptic. Wash a wound freely with the solution and if you are treating a cut, wound or sore, soak your hands in it before touching the affected part. This antiseptic solution should also be used to cleanse your surgical instruments both before and after use. Don't spare the antiseptic, it is cheaper than a dose of blood poison.

Pneumonia:—This is usually due to exposure or a severe chill and sets in with a shivering fit. The temperature rises suddenly, the cheeks are flushed and nostrils dilated. The breathing becomes very rapid and a severe pain develops in the affected lung. A troublesome racking cough is a constant symptom as is also the expectoration, which is dark in color and extremely sticky. Good and careful nursing with the object of keeping up the strength is the main point in the treatment of pneumonia. Whiskey is the best means of keeping a man up to the mark. Administer one-finger dose of the "fire-water" every three hours, increasing the dose up to two or three fingers as you think the patient requires. The affected part of the chest should be covered with a hot poultice and the fever can be relieved by cloths wrung out in cold water and applied to the head. The diet should be

what is commonly termed "slops," such as light broths, but no meat. If fruit is obtainable it should be given. The temperature should be taken at least three times a day. You can in this way tell how the patient is and treat accordingly. When the temperature has fallen to normal as indicated by the clinical thermometer (for which separate instructions are given), a light nourishing diet should be given to maintain the patient's strength.

2. SURGICAL

Now that the drug treatment, with which it is necessary that you be familiar, has been gone over with reasonable thoroughness, we will take the surgical treatment which you may be called on to render. Field Surgery is a very big question and the most we can do with it within the bounds of this article is to indicate the general line of treatment in the accidents most likely to happen. These we may divide under the general groupings of fractures, dislocations, cuts and wounds, burns, and suffocation from drowning or other cause.

The right thing to do will be given under each heading and the bandages, dressings and surgical sundries required will be listed at the end of the article.

FRACTURES

Fractures are divided into two classes, simple and compound. By a simple fracture is meant that the bone has been broken but has not been driven out through the skin. Compound means that the skin is broken and one or two ends of the fractured bones protrude. A fracture is a thing that a man taking his

chances in the backwoods is quite likely to encounter.

Simple Fracture:—The most important thing to be done in case of simple fracture is to prevent it becoming compound. Great care, therefore, should be exercised when you are examining an injured person, so that you will not by handling the injured limb too freely produce this condition. The general rule for distinguishing between a fracture and a dislocation or sprain is a change in the shape of the limb, unnatural mobility, pain, deformity, and if the limb be gently twisted by the hands placed both above and below the injury a slight crackling sound will be evidenced. This is caused by the broken ends of the bone rubbing together. In medical language this is termed crepitus. If there is any possible chance of getting the patient to a doctor do so. The injured limb should be fixed at once with splints and bandages. The splint must be so applied as to render the joint both above and below the fracture immovable. Anything that will keep the member rigid will do for a splint; a length of sapling or a casing of strong tree bark. At least one Esmarch Pictorial Triangular bandage should be included in your outfit. This extremely useful bandage has printed on it pictures that show clearly how to use it in making a sling for the arm or to bind a splint, in addition to its other uses.

The greatest care and gentleness must be employed both in treating and carrying the patient out to where the services of a doctor are available. The conditions that prevail at the time of the accident will indicate the best methods to be employed to this end, but whether the patient is carried, laid flat in a canoe or in a sling seat suspended from a bough, there must

be as little jolting as possible. When the arm is fractured the patient is able to make his own way pretty well once the arm has been bound in a sling. If it is absolutely out of the question to get a doctor to reset the fracture, the following method of treatment should be adopted. Remove all the clothing from the limb in such a manner as to cause the smallest amount of disturbance. If necessary, cut the clothes off. Grasp the end of the injured member farthest away from the body and give it a strong, steady pull straight away from the body. When the broken ends of the bone are separated they can be manipulated into place by the hand which was holding the limb above the fracture. You will know when this is affected by the feeling and shape of the limb. The limb should now be encased in pads of cotton and bandages. (Pay special attention to pads of cotton over long points.) A splint long enough to render the joints above and below the fracture rigid is now applied. Absolute rest for the injured member should be assured. When bandaging on the splint take care not to bandage too tight as this would have a tendency to stop the circulation.

Compound Fracture:—A compound fracture is a very, very serious matter. The first point of importance is to prevent septic poisoning. To do this make a 1 in 1000 solution of your corrosive sublimate, bathe the wound carefully with it using a wad of absorbent gauze. The matter of getting the cleansing thoroughly performed should engage your whole attention. If there is any dirt in the wound, it may be necessary to use your surgical knife to enlarge the wound made by the bone, thus enabling you more thoroughly to cleanse it. Before washing the wound with the gauze, soak

the gauze in the bichloride (corrosive) solution and in a separate basin or container place a little of the same solution and soak your hands in it. When this is accomplished do not try to "set the bone." If a doctor is not within communication limits, you must endeavor so to fix the fractured bone that the pieces do not project.

An antiseptic "filter" should now be placed over the wound. To make this, soak a piece of absorbent gauze in the bichloride (corrosive) solution. Place it over the wound, over all put a pad of cotton, then bandage. Secure the limb with a splint to keep it straight and either get your patient to a doctor or get a doctor to him. A compound fracture with the patient in the hospital and good surgical assistance available is a serious matter. How much more serious the case is with your patient in camp is self-evident.

Fracture of the Skull:—This is just as serious a condition as a compound fracture. The risk of infection is just as great owing to the lesions in the nose and ears. That is to say it is a compound fracture with the external wound through the lining of the nose and ears, from which there will be bleeding. In the case of fracture of the skull you will have a hemorrhage from the ears, nose and mouth. Lay the patient down with the head resting in a comfortable position. Apply cold water dressings, then the antiseptic dressing and a tight bandage. The methods of bandaging will be described in another section. Give nothing by the mouth until after the bandage has been applied. A small piece of cotton soaked in the antiseptic solution should be placed in the nostrils and in the ears to prevent infection.

Fracture of the Collar Bone:—This is generally the result of a fall on the outstretched hand. The symptoms are unmistakable. The patient's head is inclined towards the injured side and unless the injured arm is supported it hangs much lower than the other. The best method of setting the fractured collar bone is to brace back the shoulders by means of two padded triangular bandages placed well over the tips of the shoulders and the ends tied together between the shoulder blades. The arm is then supported in a sling.

DISLOCATIONS

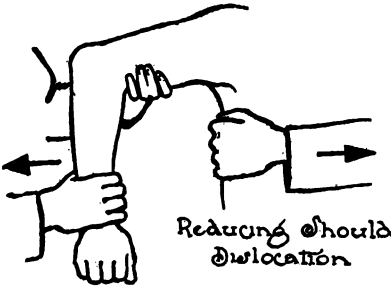
A dislocation occurs when the head of a bone is knocked from its socket at a joint. Dislocation is not nearly as hard to treat or as dangerous as a fracture. When a man is away from his comrades and through some accident suffers a dislocation, it may be necessary for him to treat himself. To give a rough and ready description of the treatment we will say that the dislocated member must be pulled very strongly so as to stretch the muscle tissues and draw the dislocated bone away from its wrong position. It can then be let slip back into its right place. This statement is very broad, but it will give an idea of the necessary treatment. An extremely strong pull is always required. Do not be afraid of hurting the other fellow; it will only be for a few seconds and he has to be hurt. You will see from the illustrations that certain means of leverage are employed to reduce a dislocation. These are employed so that once you get the right "grip" on the dislocated limb, it has to come the way you want it, no matter how much the pain involved impels the patient to squirm or "give" to your pull. A disloca-

tion will be recognized by the pain and deformity at the joint in addition to inability to use the limb.

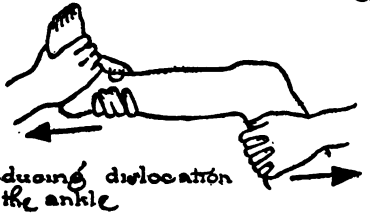
Dislocation of the Ankle:—Dislocations of the ankle are the forward or backward ones. In reducing the dislocation at the ankle, the leg must be bent at right angles at the knee joint so as to relax the very powerful calf muscles. The treatment is to pull the foot steadily until it is straight and then put a well-padded support on the side of the leg, reaching between the knee and below the ankle.

Dislocation of the Knee:—Forward dislocation of the knee is the commonest form. Place the patient on his back and simply bend the knee. The bones will slide into position. The leg should be put up in a bent position and supported on a pillow or blanket roll.

Dislocation of the Shoulder:—Dislocation of the shoulder is the commonest of all the dislocations. It usually occurs in a forward direction and its indications are great pain, numbness of the limb, due to the pressure of the bone on nerves, no abnormal mobility of the arm, in fact the upper arm is nearly immovable. The elbow projects out from the side in a backward direction. The simplest method of reducing this dislocation is to place your patient so that he cannot follow you when you pull the injured arm. This can be done by placing him against a tree or having a third party clasp him around the waist. Grasp the injured arm with one hand above the elbow, and the other hand grasping the wrist. Lift up the arm until the upper arm comes straight out from the body and the forearm is then bent to a right angle. Pull strongly and steadily until the head of the dislocated bone passes outward. You can then get it back into posi-

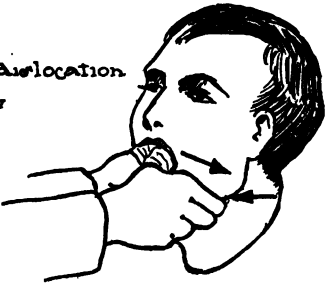


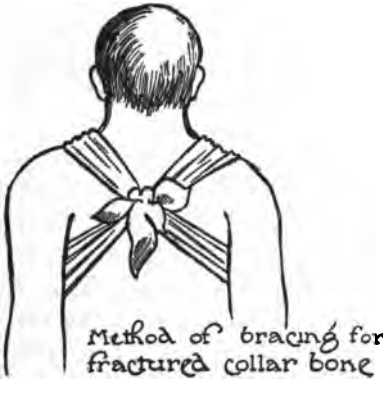
Reducing Shoulder Dislocation



Reducing dislocation of the ankle

Reducing dislocation of the jaw





Method of bracing for fractured collar bone

From diagrams by H. C. Phibbs

tion by simply dropping the patient's arm rapidly. Place the arm in a sling and bandage tight to the body.

Dislocation of the Elbow:—The commonest form of dislocation is that of both bones of the forearm backwards. The indication of this dislocation is that the arm is held fixed at an angle of about 120 degrees. Any attempt at movement causes great pain and is followed by a rebound of the limb to its abnormal position. The treatment is to straighten out the limb forcibly; catch the forearm in one hand and the upper arm in the other hand and pull them in opposite directions. To get leverage you can press the upper arm backwards with your knee, next slowly bend the joint and the bones slip into position with a snap. Fix the arm bent to less than a right angle and support it in a sling.

Dislocation of the Jaw:—Treat this by standing in front of your patient. Have both your thumbs well wadded with cloth so that when his jaws snap back into position you won't be bitten. Grip the patient's jaw on both sides with the thumbs inside the mouth on the back teeth and the fingers gripping underneath the bones. Press down with your thumbs and up with your fingers until the jaw snaps into place.

Dislocation of the Finger or Toe:—A steady pull suffices with the smaller joints to replace them when dislocated. If you will pull on your finger, you will feel the bone move in its socket; this illustrates how the bone "sets." After a dislocation of any kind, the limb should be bathed in a lead and opium lotion made up as described in the medical section. The limb is kept absolutely at rest for a few days or until the

swelling disappears, when slight movements may be attempted.

WOUNDS AND THE ARREST OF BLEEDING

A severe cut or wound causing considerable loss of blood is a condition which in camp or on the trail you are very likely to encounter. The most essential thing for the stopping of the blood is the tourniquet. A prepared tourniquet should be carried, but a makeshift of cord or cloth will do just as well in an emergency. All that is necessary is to apply pressure above the wound so as to compress the artery which has been cut. In this way the escape of an excessive amount of blood is prevented. The blood from an artery is of a bright red color and pumps from the wound in spurts. The blood from the veins is darker and flows more slowly and steadily. To treat a severe wound with arterial bleeding, it is necessary that you know the general course of the main arteries. In case of bleeding from a wound on forearm or hand, the main artery can be felt beating like a pulse along the inner side of the biceps muscle in the upper arm. In the case of bleeding from a wound in the foreleg or foot, the main artery is located behind the knee, it also having a pulse-like movement.

If the wound is on the upper part of the leg the artery will have to be found as it emerges from the abdomen into the thigh. You can feel it distinctly if you will press deeply on a point half-way along the crease between the thigh and abdomen. When the artery has been found a tourniquet must be applied on the "heart" side of the wound so that the pad of the

tourniquet presses on the artery. The improvised tourniquet can be made from a handkerchief. A smooth round stone or a thick piece of stick wrapped in cloth will do for the pad. On the outside of the limb insert a long piece of stick between the handkerchief or cord and the flesh. Twist this stick until the pressure necessary to stop the flow of blood has been reached. This severe pressure must be removed at the earliest possible moment for fear of damage to the vessel. When the flow of blood has been stopped make a solution of your antiseptic (corrosive sublimate) as previously directed and with a piece of gauze soaked in this thoroughly cleanse the wound.

Many writers on First Aid recommend that a forceps should be used to compress the artery. This is dangerous, as any surgeon will tell you, because there is great danger of gripping the nerves with the forceps, instead of the artery. If the tourniquet has been properly applied there is no need to use an artery forceps. When the flow of blood has been controlled, boil your surgical needle and a length of silk to sterilize them. Then let them soak in the antiseptic solution. Take your forceps, soak thoroughly in the antiseptic, then you can use it for a needle holder. To stitch the wound draw it together. Grip the needle threaded with a small piece of silk in your forceps. Insert the needle at least one-quarter of an inch deep and draw it out by means of the forceps. Now you should draw the two ends of the silk just tight enough to draw the edges of the wound snugly together. Make another stitch about half an inch further down, and so on until the whole wound is sewn. Dress over the wound with gauze made antiseptic by soaking in the solution.

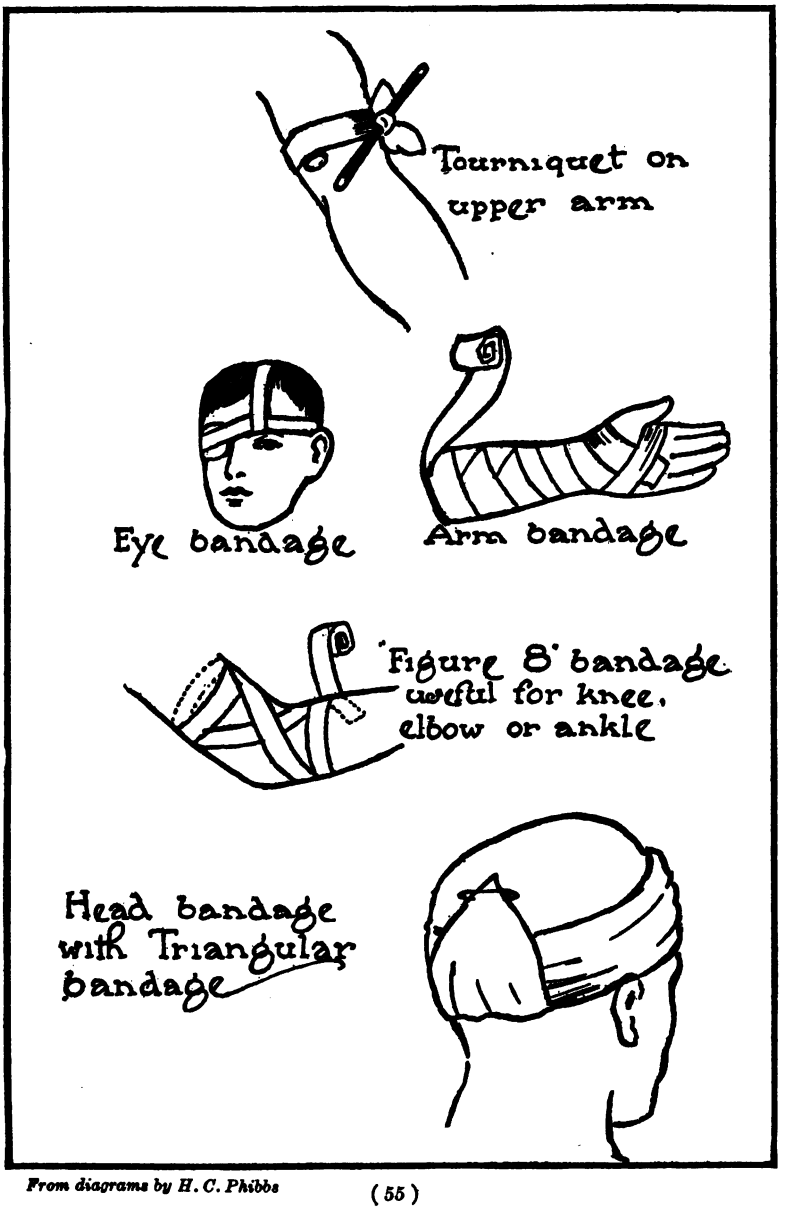
Over this place a layer of cotton, then bandage. Your first stitch should get under the main bleeding vessel. If on removing the tourniquet an excessive flow of blood starts again, you know that you have not caught the cut artery. In this case, you will insert another stitch deeper than the first. As a rule the drawing together of the edges of a wound is sufficient to stop bleeding from an artery of medium size.

You will notice that in the above paragraphs the word antiseptic is used very frequently. This is an important thing. Have your hands, instruments, and in fact everything that you use in an operation of this kind soaked well in the solution of corrosive sublimate. The instruments should be cleaned in it before being returned to the case. *Remember never to put a stitch in a wound unless it has been thoroughly cleaned out.* In case you cannot be certain that the wound is clean, it is better not to risk a stitch but rather to treat by applying antiseptic dressings at least three times a day. Remove the stitches after three or four days by cutting them and drawing the unknotted end from the flesh. If from the appearance of the wound you think inflammation is occurring, *remove the stitches at once.* In the case of a small wound where the damage is to a certain extent superficial it will be sufficient after thoroughly cleansing the wound to draw the ends together and secure them with strips of sticking plaster instead of stitching.

Gunshot Wounds:—In the case of a wound from a firearm, thoroughly cleanse the wound, removing all shreds of wad, clothing, etc., with your lancet if necessary. All torn skin, etc., should be removed also. Use your scissors freely to lay open the wound. A

deep gunshot wound is too dangerous to allow any squeamishness to prevent giving the patient pain in getting the wound clear and clean, for there is a liability of tetanus setting in. Do not attempt to remove the bullet or shot; when you get your patient to a doctor he will attend to that. Wring a piece of gauze out of corrosive solution and place it over the wound, dressing over this with cotton and bandage. In the case of wounds from small shot, the wounds should be washed with a solution of alum. Follow this with application of pieces of gauze or clean cloth wrung out of hot water. Change these every couple of hours.

Burns and Scalds:—In the case of a burn or scald the air should be excluded as quickly as possible from the injured part. A mixture of flour and water made into a paste and applied over the burn is a good rough and ready dressing where the skin is not broken. But the dressing which has been approved the best for burns of this character is carron oil. Carron oil came of late into disfavor as an emergency dressing for burns because it had to be carried as a liquid. It is a mixture of linseed oil and lime water and will soak practically through every cork or cover. It has, however, been put on the market as solidified carron oil, that is to say carron oil in the form of paste or ointment. This is an ideal form in which to carry it and a tube should be included in the medicine case to treat the small burns. These of course are the kind generally met with in camp life, being the result of an accident over the cooking fire. If it happens that the burn is extensive and the skin broken, cut away the clothing and burned tissues, wash the part well with corrosive sub-


Tourniquet on upper arm
Eye bandage
Arm bandage
'Figure 8' bandage useful for knee, elbow or ankle
Head bandage with Triangular bandage

From diagrams by H. C. Phibbs

limate solution made up as per previous directions, place bicarbonate of soda or ordinary baking powder over it and dress with antiseptic gauze.

Drowning:—The treatment of drowning and suffocation is practically the same. It calls for the application of artificial respiration. In the case of drowning the mouth and nostrils should be cleaned of sand, weed, or other matter. The Sylvester method is that which is generally accepted as the best. Lay the patient on his back with the shoulders resting on some firm object such as a small cord of wood, over which a coat or other garment has been placed. Place the head so as to lie to one side, draw the tongue forward and keep it projecting beyond the lips. It may be necessary to hold the tongue outside the mouth by means of a tape or string. Kneeling behind the patient grasp the arms just below the elbows. Pull them steadily backwards above the patient's head as far back as they will go and keep them in that position for two seconds. By this means the air is brought into the lungs. Next turn down the patient's arms, bending the forearms over the abdomen, keeping the upper arms close to the side of the chest; press gently and firmly for two seconds against the side and front of the chest with the object of expelling the air from the lungs. This must be repeated tirelessly and deliberately at the rate of about fifteen times a minute until some respiration is noticed. When respiration is being restored circulation should be promoted by rubbing the limbs briskly and applying hot bottles to the body and limbs. Do not wait to remove the wet clothes until respiration is restored. No attempt should be made to give anything by the mouth until breathing

has been restored. Then a little hot soup and a small quantity of stimulant may be administered. In the case of treating a drowned person, you should not despair if you cannot produce respiration in half an hour or longer. It may even be necessary to keep up the movement for two hours or more before any sign of life is evident.

Bandaging:—The compressed form of bandage is strongly recommended. Not only does it save space, but the package of such a bandage known in the drug trade as a tabloid bandage ensures that only as much as is required is drawn from the package, the remainder being kept clean and covered for another occasion. Bandaging in the woods or desert places will necessarily be of a rough and ready character, but if the bandage be started at the thin end of the limb and carried to the thicker part, and be applied not too tight but tight enough to hold it secure, it will serve its purpose quite as well as the neatest work of the surgeon. The handiness and deftness of the camper and backwoodsman will suggest to him the best means of applying a bandage to fill a certain need, but the accompanying few diagrams show best how to apply it.

SUNDRIES

The use of a few sundries which should be included in the medicine case will now be indicated.

The Splinter Forceps:—A useful little tweezer-like instrument which as the name indicates is used for abstracting a splinter from the flesh. If ever you get a "sliver" under the finger-nail this little instrument will prove invaluable in the removal.

Court Plaster:—If you get a little nick, cut or an

abrasion that is not serious enough to call for a regular dressing, the sticking plaster will be found useful.

Aromatic Ammonia:—Or smelling salts, which can be bought in little capsules to be cracked between the fingers when needed, are of value to bring a man to in case of faintness.

The Clinical Thermometer:—This is used to give indications of the temperature in feverish conditions. The way to use the instrument is to give it a few sharp shakes downward until the mercury drops to about 95 degrees. Place the mercury end of the thermometer in the mouth of the patient under the tongue, leave it in the mouth for a minute, the patient keeping his mouth closed and breathing through the nose. If the temperature reads about 98.4 it is normal, if above 100 the patient is in a serious state and if above 105 the condition is critical. In fever patients the thermometer is liable to be bitten in two when placed in the mouth. If you think there is any possibility of this, it is better to take the temperature from the armpit. Just place the thermometer in the armpit and close the arm to the side of the chest. Do not start your case by taking the temperature in the mouth and then going back to the armpit and then after awhile taking it by the mouth again. Stick to the one method all through.

Now we have covered about all that we intend to in these notes on first aid for the camper and outdoors man. There is a multitude of things we haven't dealt with, but this paper was never started with the idea of making it a complete treatise on all the diseases that flesh is heir to. If it has covered the most likely

ailments and accidents to be encountered, it has fulfilled its purpose.

The matter of making up a medicine or first aid kit to meet the treatments laid out in the preceding is one which should now engage our attention. Below will be found a list of the things which the writer thinks go to make up a complete outfit for the small party on a trip of from a couple of weeks to a couple of months in the woods. The quantities can be increased for a trip of longer duration.

The author uses a case put up by the firm of Burroughs Wellcome & Co., of New York and London. They call it the Tabloid First Aid for Backwoodsmen. The standard fittings of these as they put them on the market differ slightly from those recommended in this paper, but the firm will have the case specially fitted if you wish to meet the suggestions the writer has laid down.

The complete Camper's First Aid Kit should contain the following:

10 small vials filled with the drugs specified in the medical section of this paper.
1 2 oz. package Compressed Cotton.
4 ¼ oz. package Compressed Cotton.
1 Tourniquet.
1 package 6 yds. by 1 inch Bandage.
2 packages 3 yds. by 1 inch Bandage.
2 packages 3 yds. by 2½ inch Bandage.
1 package 6 yds. by 1 inch Bandage.
3 packages each containing 1 yd. of Absorbent Gauze.
Couple of Surgical Needles.
Small spool of Surgical Silk.
10 yd. roll Adhesive Plaster, ½ inch.

Small package Adhesive Plaster, 1 inch.
Container of safety pins, assorted sizes.
Container of ordinary pins.
Container of Court Plaster.
Tube of Borofax or Boric Acid Ointment.
Tube of Solidified Carron Oil.
1 small box Aromatic Ammonia vaporoles.
Leather wallet containing the following surgical instruments:
1 Clinical Thermometer.
1 Artery Forceps.
1 pair Surgical Scissors.
1 Lancet.
1 Splinter Forceps.

Winter and Spring Shooting of Wild Fowl

By

EDWARD H. FORBUSH

THERE are gunners along the New England coast who deplore spring shooting, but who believe that they should be allowed to shoot during the months of January and February, which, they argue rightly, are not spring months; *but wide experience has shown that our wild-fowl cannot be adequately conserved and increased in numbers unless they are protected from all shooting except during the fall migration.* Prof. W. W. Cooke of the Biological Survey, who will be conceded by all who are conversant with the facts to be the foremost specialist on bird migration in the United States, says that the fall migration of wild-fowl ceases about December 1. If the autumn has been mild, and is followed by extreme cold,

* This article was prepared in 1910, but was not issued until 1912 (by the Massachusetts State Board of Agriculture). It is here reprinted by special permission.

there may be later movements that are caused by the freezing over of the fresh waters, which drives most Black Ducks, Pond Sheldrakes, Whistlers, Broad-bills and other species farther south or to the salt water. Usually such frosts occur in December, and if the shooting season is prolonged until January 1, the shore gunner has an opportunity to hunt all these birds. The season should be closed then in order to protect during the inclement season all the Ducks which remain in our waters. It should be closed on all wild-fowl at that time, for the reason that if any exception is made all species of wild-fowl will be shot.

The killing of wild-fowl during January and February should be prohibited absolutely on any coast where the fresh waters become ice-bound during these months. Ordinarily in New England most of the fresh ponds freeze in December, and the pond and river Ducks are then driven to the salt water. Because of the inferior nature of the food that they find there their flesh soon loses its fine flavor, and they become more or less "sedgy" or "fishy" to the taste. *In hard winters, when the flats are covered with ice, these Ducks are half starved. They soon become very thin and have little food value. In such winters Ducks of several species have been picked up dead from starvation and cold. They have enough to contend with at that season of the year, and no hunter should be allowed to disturb them or take advantage of their necessities.*

When the ponds are covered with ice those fresh-water Ducks which remain in the north are compelled to go to the open springs, as they require fresh water to drink. Care for their safety compels them to remain at sea or in some open bay during the day, but at

night necessity drives them to the springs. Here the gunner lies concealed to kill them. Some even cut holes in the ice to attract them. A gunner near Boston told me that during a "cold snap" he fired both barrels into a flock of Black Ducks on the ice, killing eleven, and found them so nearly starved as to be reduced to "skin and bones."

The following letter from Dr. George Bird Grinnell bears upon this point:—

"*Ducks should not be shot after January* 1, *because many of these birds mate in January, and in February and in the following months are preparing for the nesting duties of early summer.* The birds which are chiefly shot for the market are the non-diving Ducks, of which the Black Duck is the only one found in considerable numbers in Massachusetts. These birds in winter have the greatest difficulty in existing. The freshwater ponds and spring holes, where they naturally feed and drink, are frozen, and the mud flats where they might feed in cold weather, are often covered with ice, so that food is absolutely inaccessible. They cannot, like the sea Ducks, dive to great depths in search of shell-fish. They therefore seek out the few warm springs that may still be open, and congregate there, searching for food, and the gunner who learns of their presence at such a place may destroy the starving birds in great numbers.

"I learned my lesson on this subject in Connecticut in the winter of 1875-76. It was a very hard winter, and almost all the feeding and drinking places were closed by the cold, while the mud and sand flats were piled high with ice far out into the Sound. I learned that a flock of two hundred or three hundred Black

Ducks came at night to an open warm spring, and going there shot two or three as they came in, and prepared to have great sport. When I got these birds in my hand I found them a mass of feathers and bones, for the breast muscles had shrunk away from starvation, so that it hardly seemed that the birds could fly. I stopped shooting, and took the trouble to show the birds to a number of local gunners, all of whom agreed that it was a shame to shoot birds that were having so hard a time, and no local gunners shot Black Ducks again that winter.

"*I believe that if the unprejudiced opinions of marketmen could be taken on this point they would agree that birds shot in New England in winter and spring are too thin in flesh and too fishy in flavor to be a popular food,* and the average gunner—if the matter were brought to his attention and explained to him—has too much sense of fair play to wish to destroy the birds under such conditions."

Even the diving Ducks, like the Old-squaws, sometimes are reduced greatly by starvation and cold during unusually cold seasons. At such times starving birds become reckless. Mackay states that during the winter of 1888, when the sea about Nantucket was covered with ice, two men covered themselves with sheets and lay down on the ice beside a crack near a jetty on the north shore, and there killed with fishing poles about sixty Old-squaws in a little over an hour. They found on examining the Ducks that they were valueless, except for their feathers, owing to their emaciated condition. Let all true sportsmen, then, join in the movement to close the shooting season on the first day of January, and let all men lay

aside the gun then and give the birds a chance.

In emphasizing the destructiveness of spring shooting it is well to reiterate here the fact that when North America was first settled, wild-fowl bred more or less numerously throughout most of the region now known as the United States. Twenty-four species still nest within our borders, but they are now very few and far between in the east as compared to their former abundance, which they can never approach until market hunting and spring shooting are prohibited throughout the length and breadth of the land.

Audubon (1835) says that he found Wild Geese breeding sparingly about the lakes within a few miles of the Mississippi and Missouri rivers and their tributaries. He believed that they bred abundantly in the temperate parts of North America before the settlement of the country, and his opinion was founded on the statements of many old and respected citizens.

Gen. George Clark, one of the first settlers on the banks of the Ohio (about 1760), said that Wild Geese were then so plentiful *at all seasons of the year* that he was in the habit of having them killed to feed his soldiers, then garrisoned near Vincennes, Ind. Audubon's father corroborated this statement, and Audubon himself and many other persons residing at Louisville, Ky., well remember that about the first of the nineteenth century it was quite easy to procure young geese in the ponds of that district. He found the nests, eggs and young of the species near Henderson, Ky., as late as 1819.*

Mr. A. W. Butler, in his Birds of Indiana (1898),

* Audubon, J. J.: "Ornithological Biography," 1835, Vol. III., pp. 6, 7.

states that "thirty years ago" it was not uncommon to find on the upland meadows of Franklin and other southern counties, where great flocks of Geese had stopped during the March migration, numbers of eggs dropped by them. Hon. George Bird Grinnell asserts that in years gone by the Wilson's Snipe and many species of water-fowl bred in all the northern tier of States in great numbers.* Prof. W. W. Cooke says that one hundred years ago the Canada Goose bred commonly in all the northern third of the Mississippi valley. It has been known to breed of late years in Tennessee and Kentucky. It formerly bred in Kansas and still breeds in Colorado and Utah.† Even now wild-fowl nest in many parts of the country where conditions are favorable.

Rev. Herbert K. Job informs me that Canada Geese bred in Louisiana the past season (1909). Mr. Caspar Whitney, editor of Outing, stated some years ago that Teal bred in large numbers on club preserves in Currituck Sound, N. C., where they were protected in spring, and that many Black Ducks also bred on preserves there. In a special despatch to the newspapers in Waco, Tex., April 17, 1905, it is stated that in Refugio County, Wild Ducks lingered so late that they nested numerously, and it was expected that thousands of young Ducks would be hatched. Mr. Homer Wells of Waco stated that in 1904 many Ducks nested in the country about Midland, Tex.

Shooting and chasing the wild-fowl in the late winter while they were mating, and in the early spring when

* Grinnell, George Bird: "American Duck Shooting," 1901, p. 589.

† Cooke, W. W.: "Bull. No. 26, Biol. Surv., U. S. Dept. of Agr.," 1906, p. 72.

they had paired or nested, has resulted either in exterminating them or driving them out of nearly all the great regions in the United States where they formerly bred. Col. John E. Thayer says that he is positive that Mallards, Black Ducks, Gadwalls, Green-winged Teal, Blue-winged Teal, Shovellers and Pintails begin mating at Currituck Sound, N. C., by February 15, and are mated by March 1.* Audubon believed that all wild-fowl that nested in the United States were mated when they came north.

The question often is asked, "Why is it more destructive to shoot birds in the spring than in the fall?" If this were properly put it would need no answer. The question should be, "Why is it more destructive to shoot birds in fall, winter and spring, thus denying them all protection, than to shoot them in the fall?" (Those who desire to shoot birds in the spring expect the privilege of shooting them in the fall and winter also.) There are several answers that may be made to this question; (1) a long shooting season of eight or ten months, extending through the fall, winter and spring, gives the birds practically no protection, and is far more destructive than a fall season of only three or four months. (2) Fall shooting, if not excessive, merely destroys a part of the annual increase of the birds, most of which, if not shot, would succumb to the accidents of migration and to the attacks of their natural enemies. (3) Spring shooting destroys the naturally selected breeding stock, while mating or mated, and on the way to the breeding grounds, or in the very act of reproduction.

*Cooke, W. W.: "Bull. No. 26, Biol. Surv., U. S. Dept. of Agr.," 1906, p. 12.

The value of protecting birds in spring on their northward migration and on their breeding grounds is shown in the cases of the American Robin, the Bobolink and the Red-winged Blackbird. All these birds have been shot in great numbers in the southern States in the fall for more than two centuries.

Millions of Bobolinks have been shipped to market in the southern and middle States. These birds are killed mostly in the late summer and fall. The slaughter of Bobolinks in the fall for so many years has not very greatly reduced their numbers in the north, where they are protected by law in their spring migration and in the breeding season. This protection perpetuates the species.

The wild-fowl which come north in spring have survived the hardships and dangers of the winter. They are in good condition, and nearly every pair is fitted to be the parents of strong, healthy young. To kill them then should be regarded as reprehensible. A Massachusetts gunner who had been accustomed to shoot Snipe in spring noticed something peculiar about a bird which he shot, opened it and found an egg in the oviduct, ready for laying. He never shot another Snipe in spring. Two gunners in Rhode Island had killed about a bushel of Winter Yellow-legs in spring. A friend who opened some of the females found eggs developing in their ovaries.

A Cape Cod gunner assured me that it was better sport shooting Ducks in spring than in fall, for when one bird was killed its mate would "hang around" and he could bag both. A worthy citizen of Massachusetts shot a pair of Wood Ducks (legally) in April. He was then a boy, and as the pair flew past him he shot and

killed the wonderfully beautiful male, which fell into the stream. The little female circled about, came back and alighted beside her dead mate, remaining there until the boy reloaded his old single-barrelled, muzzle-loading gun and killed her. He afterwards learned that the pair had a nest and eggs in a hollow tree near by. Thus the whole family was wiped out, and there was no law then on our statute books to prevent it. Five years ago, when spring shooting was permitted in Connecticut, Snipe shooters drove Black Ducks from their nests in the meadows and killed them as they rose.

Spring shooting exterminates the birds. Fall shooting, if not excessive, may be said to take only the annual interest of this great natural resource; but if shooting is continued in winter and spring it wipes out the principal. *No one would think of advocating today a law legalizing the killing of the Grouse or Bob-whites in the winter, when they are struggling against the inclemency of the season,* or in spring when they are mating and breeding. If any man should propose such legislation his sincerity or his sanity would be doubted. Nevertheless, hundreds and thousands of gunners advocate and support similar legislation which, if enacted, takes away practically all protection from wild-fowl.

The argument often is made that it is futile for any one State to pass laws prohibiting spring shooting until other contiguous States pass similar laws. Experience with such laws, however, shows that the results of even the most local protection are often immediate and very marked. A gentleman in Rhode Island, who has a small pond on his place, prohibited shooting there,

and Black Ducks came at once and bred there annually. Another in Massachusetts owns all the land on one side of a large pond, and allows no spring shooting. In August, 1909, I saw about seventy-five Black Ducks at one time on his side of the pond, all of which and probably more were reared there. By the first of September about two hundred birds were gathered there, but none could be found on the other side, where they were unprotected. In the San Luis Valley, Col., protection given Ducks in a small enclosure about an artesian well resulted in the birds resorting to it in large and increasing numbers year by year.

A local law in Jefferson County, N. Y., prohibiting spring shooting and night shooting, soon showed its effect. Teal, Wood Ducks, Mallards and Black Ducks began breeding there at once. The increase and tameness of the Ducks and Geese were very marked, and the shooting improved greatly in the fall. When spring shooting was forbidden by law in New York State the number of Black Ducks so increased on Fishers Island that the young which they raised provided good shooting there in the fall, while on the nearby shore of Connecticut where spring shooting was allowed at that time, there were practically no breeding Ducks. The cessation of spring shooting in the interior of New York soon resulted in a general increase of wild-fowl.

In 1907 the Connecticut Assembly passed a law protecting wild-fowl and shore birds between January 1 and September 1. The following extract from a letter from Mr. E. Hart Geer, secretary of the Fish and Game Commission of Connecticut, under date of February 19, 1910, shows the results secured under that law:—

"The encouraging conditions prevailing in Connecticut at the present time, as the direct result of stopping spring shooting, justify me in saying that the same conditions would obtain the entire length and breadth of the United States and Canada if uniform laws regarding spring shooting were enacted.

"*During a period of nearly forty years of my own observation of wild-fowl on the Connecticut River, I have not for many years seen or heard of so many Ducks as have been on the river during the past year.*

"Black Ducks have been more numerous and in larger flocks during the past year than I have known of for many years past. At one time last December eighteen Black Ducks were taken out of a flock of thirty-five with four barrels—two guns—in the hands of two hunters. This has been almost an impossibility for a number of years past to accomplish. Broad-bills were on the river in immense numbers all the time last fall, and I have seen flocks, estimated to contain more than one thousand, feeding within sight of my house.

"It is indeed gratifying to see the wild-fowl increasing in such numbers, and there is but one way to account for it, and that is that during the past two springs they have not been shot into and driven away from our shores when on their annual passage.

"Authentic reports come to this office of large numbers of Black Ducks being seen in their favorite feeding places after the close of the open season, January 1. It is estimated, by careful computation, that larger numbers of Black Ducks were shot and shipped from along the Connecticut River the past season than have been shot previously during a period of five years altogether.

"With all of these encouraging signs pointing to an abundance of wild-fowl again, which will afford opportunity for royal sport for four months of the year, we are not now hearing the clamor for a longer open season.

"Those who were, for selfish reasons, most persistent in asking our Legislature for a longer open season have had presented to their actual view an object lesson which cannot be disputed, and they are convinced of the wisdom of prohibiting spring shooting of wild-fowl for all time."

Under this law similar conditions have been continued in Connecticut, although the dry seasons of 1910 and 1911 have been unfavorable for fall duck-shooting in the interior.

Mr. John H. Sage, secretary of the American Ornithologists' Union, writes as follows regarding the effect of prohibiting spring shooting in Connecticut:—

"In 1907 the General Assembly passed a wise and beneficent act, establishing an annual close season on Wild Ducks, Geese and Swans, from January 1 to September 1. Experience with such laws in other States had proved that their effect was to increase the number of the birds. The game commission of Minnesota made the following statement in 1906, after several years' experience with a similar law: 'Every year our aquatic fowl are increasing, and this year we have had local Ducks breed in every slough where water is found.' Two years' trial of this law in Connecticut has shown a good beginning toward a similar increase here. Black Ducks and Wood Ducks have begun breeding in unusual numbers. Wild Geese have alighted where they have not been seen

before for years, and Mallards are reported to have bred within the State; also, the migratory wild-fowl, which remain along our coast in winter and spring, have increased in numbers."

Mr. W. T. Payne of Boston writes me that in some Vermont marshes in which he is interested, and where spring shooting has been prohibited for years, practically all the wild Ducks are breeding, also Canada Geese. He names the Black Duck, Mallard, Widgeon, Shoveller, Blue-winged Teal, Green-winged Teal, Gray Duck, Wood Ducks, Bluebill and Whistler. He says that the careful protection of these marshes during the spring and summer months has accomplished wonders in the numbers of Ducks reared there. Prior to the prohibition of spring shooting there were very few Ducks in these marshes on the opening of the season; now there are quantities of Ducks there, and also in the other near-by marshes, when the fall season opens on September 1. Others corroborate his statement.

Mr. W. S. Bogert writes me from northern New Jersey (1911) that during the past three years, since spring shooting was prohibited, he has noted a considerable increase in the number of Ducks in his vicinity. Previously they had decreased until very few came to his neighborhood in migration, and only a few Wood Ducks bred there. More were seen in 1909, still more in 1910, and two pairs of Black Ducks and one pair of Scaup bred near his place in 1911. He found Wood Ducks rearing their young as usual, also four pairs of Scaup, five pairs of Black Ducks and one pair of Whistlers. These Ducks and their broods remained all summer and fall in a marsh within a short ride of

New York City, and in October a flock of fifty Ducks remained in the marsh for a long time, and large numbers came in at night and left at daylight. This increase of wild-fowl so near New York City probably cannot long continue, but it is significant.

On Long Island spring shooting has been prohibited nominally for years, but an unfortunate provision allowing the spring shooting of Brant has given the gunners an opportunity to shoot all kinds of wild-fowl under the pretense of Brant shooting. They were not slow to seize this opportunity, and spring shooting was common along the coast of Long Island until 1910, when spring Brant shooting was prohibited by law, leaving the gunner no excuse for being out with a gun at that season. Among the results of the enforcement of this law are the protection of the migratory wild-fowl which pass north along these shores in spring and an immediate increase in the numbers of Black Ducks breeding locally. *Dr. Frank Overton of Patchogue, N. Y., is given by Prof. T. Gilbert Pearson as authority for the statement that over three hundred Black Ducks remained last summer on the meadows near Moriches, and many were reported as nesting.*

Massachusetts has now (1911) a law protecting all wild-fowl from January 1 to September 15. Though passed in 1909, it was placed on the statute books too late to have any effect that year, but during the winter and spring of 1910 increased numbers of several species of wild-fowl were seen along the coasts and in the streams and ponds. More Wild Geese than usual stopped here. *Black Ducks and Wood Ducks bred in many localities where they had not nested for many years. If this law is allowed to remain in force for*

a few years longer its benefits will be plain to all.

If the southern people were permitted by law to rob and kill those of our citizens who visit them in winter should we consider that a sufficient reason why we should plunder and murder those, who, having escaped the dangers of the south, return in safety to their homes in the north? Are we so short-sighted that we cannot see that spring protection works to our own advantage? When all is considered we find that the shooting in the south does not affect our supply of birds here nearly so much as is commonly supposed. The majority of the wild-fowl which are killed in the south are birds which never saw New England. They are bred in the northwest, and reach the south in winter by journeying south or southeast across the country, and never come here at all. Also, many of the species which are shot along our coasts are rarely hunted in the south. Wood Duck and Teal go far south, *but many Black Ducks and some of the bay and sea Ducks rarely go very far to the southward of Massachusetts.* The southern gunner does not consider the Scoters or "Coots" and the Mergansers or Sheldrakes worth the powder and shot necessary to kill them, and he rarely shoots them. These birds are shot mainly on the coast from Labrador to New Jersey, and they must be protected here if at all. *Many Black Ducks, some Brant and many sea Ducks remain in winter off the coast of southern New England and New York, particularly in mild seasons, and if protection is continued here more will remain.*

Some gunners, especially those on Cape Cod and Martha's Vineyard, claim that they have no chance to shoot certain species except in the spring. While

this is not strictly accurate, still it has some foundation in fact, particularly on the island of Martha's Vineyard, where Geese appear more in spring, and are less difficult to take than in fall. Since spring shooting has been stopped, however, more Geese have appeared there in fall. This island, also, is a natural breeding ground for wild-fowl, and with spring shooting stopped there it should be possible to raise Geese enough on the island to attract others, and thus to afford the inhabitants good shooting in the fall. Every species of wild-fowl which comes up our coast in spring goes down it in the fall (there are a few, however, which are rarer in spring than in fall). The opportunity is open to all the people along our coasts to shoot these birds in the fall or in December. Those who are not able to avail themselves of this opportunity because of the cares of business, or peculiar local conditions, are in no worse case with spring shooting prohibited than are the *great majority of gunners of the interior of the State who now get practically no wild-fowl shooting*, and who never will have any unless spring shooting can be prohibited forever, that the birds may have a chance to come back to rest, feed and breed along the rivers, on the lakes and in the swamps of the State. All spring shooting should be prohibited, because no shooting should be allowed in the breeding season. Breeding birds must not be disturbed. When "the law is off" on one or more species many lawbreakers take advantage of this fact, and if they do not find what they seek they shoot something else. I have known reputable men who, failing to get Snipe in spring, shot Swallows on the meadows for practice. Irresponsible, lawbreaking gunners, when out shooting

in spring or fall, will shoot at sight any large bird that they see, and many small ones, whether protected by law or not. *Spring shooting should be stopped, that all useful birds may be protected in the nesting season. Then a shot fired in spring will be a matter of inquiry for every game warden, and nesting birds will have some peace.*

Within the past twenty years most of the Provinces of Canada and many of the States of the Union have adopted regulations forbidding spring shooting. Already this has resulted in an increase in the number of birds breeding in many of these States and Provinces, and, as a result, the fall and spring flights along the Atlantic coast are beginning to increase. This increase, to which Massachusetts has as yet contributed very little, is now used by the advocates of spring shooting as an argument for permitting it here. They say virtually, "our neighbors have withheld their hands; they have protected and increased the birds—so much the better for us. Let us now have an open season in winter and spring, kill all we can, and thus take advantage of the increase resulting from the forbearance of our neighbors who are foolish enough to protect the birds for our benefit." Comment on such reasoning is unnecessary.

The advocates of spring shooting also point to the fact that many more wild-fowl are killed in winter in the southern States than are killed here. Their principal argument is that we should permit spring shooting here because it still is allowed in the south. Even from a selfish standpoint this is the weakest possible argument for spring shooting. By killing wild-fowl in the fall we certainly can prevent them from

falling into the hands of the southerners; but those which come back to us in spring have escaped both northern and southern gunners, if, indeed, they have been south at all. Why should we kill them then, when they are going to their breeding grounds, and when every mated pair killed cuts off the return to us in the coming autumn of perhaps six to a dozen young? Self-interest alone should prohibit spring shooting.

Mid-Winter Canoeing in North Carolina

By

JOHN W. ACHORN, M. D.

WE PUT our canoes in at Blue's Bridge on the Lumbee River, near Pinebluff, North Carolina, and started down stream. In an hour's time we reached High Hill, one of the bluffs which make into the river at intervals, having run nine miles through the heavy timber of the river-bottom on a stream that only a canoeist expert with the paddle is qualified to negotiate. Here we started up a fire for lunch.

Thirty minutes down from Blue's Bridge we ran under the nests of a colony of blue heron, but at this season of year the birds are gone south. Although we were all men used to the woods, but one of us had ever seen the nests of these birds, and strange to tell,

* Mid-winter canoeing is likely to prove a novel idea to many of our readers. This article, prepared by the President of the Mid-Winter Canoeing Club, describes in a familiar style a specimen trip of that organization. Those interested would do well to communicate with Levi Packard, Secretary, Pinebluff, N. C.—Ed.

one of our party, who had been made a friend of a noted Indian tribe by a vote of its council, had been given the name "Blue Heron."

We also saw a wild hog, but he was too quick for us; with a characteristic "whoof," that indicated he sensed the situation, he faded into the undergrowth. He was a big, red fellow, the color suggesting that his ancestors had been wild for generations. The black and gray wild hogs are said to have been dependent upon their own resources for a less time. Wild hogs are the hardest to corral of anything we hunt in the river bottoms.

After lunch we started the canoes again and ran to Fox Den, eleven miles below High Hill, and the only possible tenting place on the river in that distance, unless one took to the swamp, as one does when following the hounds on a raccoon hunt. Squire Campbell, who captured forty-eight raccoons last winter, said to the writer, "Thar's more music in a pack o' hounds in full cry on a hot trail than there ar' in a church orgin." On this run we flushed a gang of wild turkeys, and they flew leisurely away down stream. The man in the bow of the canoe shot twice with a rifle and missed both times. The man in the stern thought he could have hit any one of those turkeys with a rock, if he'd been in the bow of that canoe. It was a case of too many guns, for there was a shot gun in the bow as well as a rifle and if the latter had been used we would have had turkey next day for dinner. The turkeys on the river are unaccustomed to canoes and a still paddle, and are easily taken off their guard, but they will soon learn. A canoe was never seen on these waters until four years ago.

Photos loaned by J. W. Achorn

LITTLE GLIMPSES OF THE LUMBEE

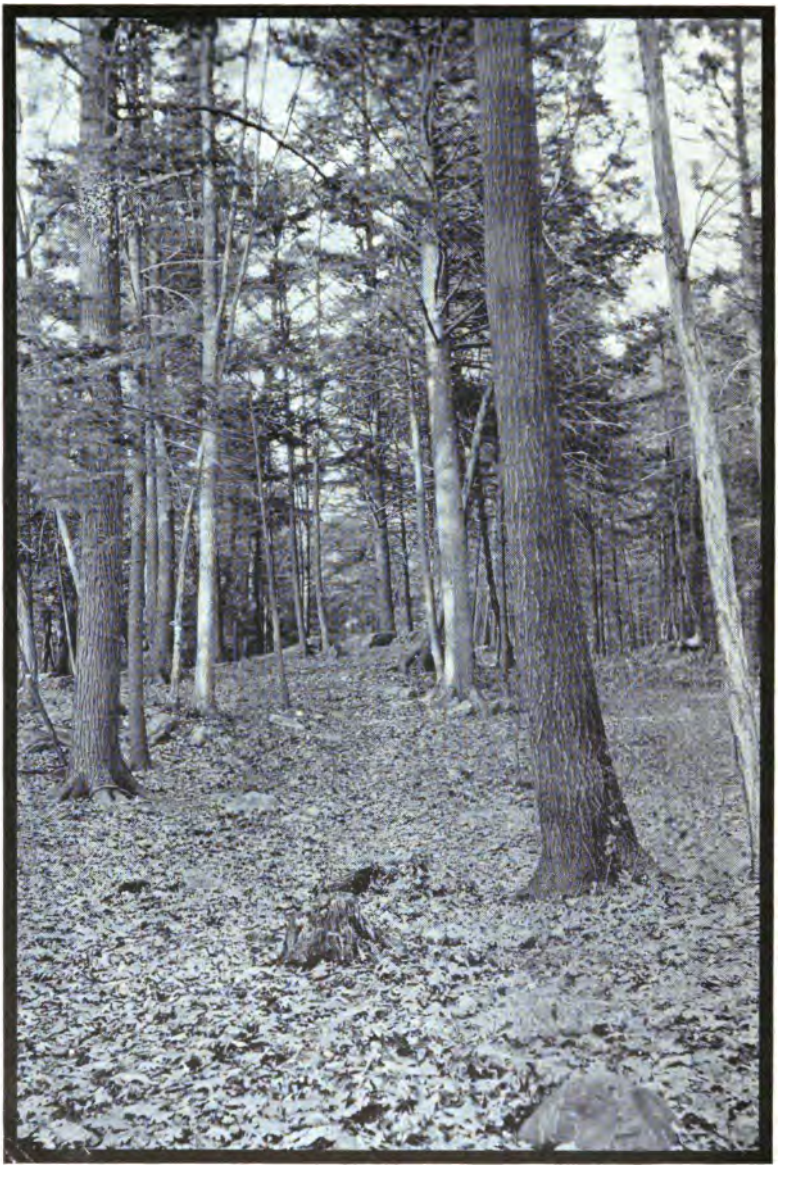


Photo by W. P. Bradburn

A FOREST AISLE

Five miles below Fox Den we met up with McLeod's Bluff, and went into camp for the night. The bluffs along this river are of hard white sand, grown in black-jack (a sort of scrub oak), and lowland pine. These bluffs come into the river every six or ten miles, and they make ideal camping grounds. There is plenty of fat wood to start a fire and it will catch from a lighted match. To get rid of the smoke we use the dead scrub oak, which makes a perfect fire for camp cooking.

There were five in our party, and in a few moments each man had pitched his tent and was busy gathering pine shatters to spread under his sleeping bag; for a sand bluff has no bedsprings in it. In front of each tent a camp-fire was built, our darkey helper toting in a good pile of oak and pine for replenishing the fires. His black figure moving around the fires during the night was one of the picturesque features of the situation. The average winter temperature in the Sand Hills is 43 degrees, but often it is much colder and the camper must come prepared to face Jack Frost o' nights and in the early morning, before the southern sun walks up the sky and turns the crisp air into a summer's day. There are no orange or banana trees in the sand hills section of the Lumbee River, which descends from an altitude of 700 feet to the sea. In April and May it is quite another thing, when one sleeps with the tent-doors wide open and dreams of the big black bass and pickerel caught during the day and of the wistaria vines and the red bugle which climb the tree trunks along the banks of the river.

As soon as camp was made the kitchen fire was started in the centre of the circle of tents, iron racks

being set up over it to hold the kettles and pails full of good stuff to eat. For supper we had prunes, rice, bean "swagum," tea and biscuits done in an oven placed on the ground on the straight side of the fire away from the draft and cinders; for there was some air stirring. While some of us were getting supper, those who were more philosophically inclined insisted on fishing. Jack bite throughout the winter, and jack or pickerel in these waters have an unusually fine flavor. Bass bite, too, but not until one gets down into the warmer waters on the lower levels, where "fish bite any time of year," and even the snapping turtle takes kindly to a squirrel skin bait and never voluntarily lets go. One fish in particular, called locally "red robin," a perch of a beautiful color, in the spring time rises to a fly like bass. But in order to tempt them or any other of the game fish, live bait (minnows) is best, and it is easily obtained on the smaller streams that empty into the main river on the flanks of the bluffs.

After supper when everything was cleaned up we lit our pipes—those of us who smoked; for some of us had knocked off for the sake of a little more character; and we told stories, each one in turn venturing cautiously to tell a story just one shade better than the man before him had dared to put up; for none of us had camped together before, and we were diplomatically sizing each other up as to veracity and real experience in the big woods.

The next morning, just as day broke and the fires had been brightened, a trapper who was making the rounds of his traps sand-sifted into camp; and upon our learning that he had a pack of fine hounds in leash at his cabin about a mile away, we engaged him to give

us a day's sport with the dogs. He took us two miles up-stream to the yoke-end of a great bow in the river that embraces a swamp more than a mile deep, known to be the headquarters for deer, wild hogs, foxes, raccoons and other varmints. The dogs were turned loose. In a few minutes we heard a row going on in the wild cane on the edge of the swamp and directly our friend the trapper appeared holding up by the tail a raccoon that one of the dogs had nosed out and sent to the happy hunting grounds. This raccoon had evidently been a little late in getting home that morning and had decided to take a nap in the cane before proceeding to his bed in a hollow gum tree half a mile further on. The dogs picked up another big coon and then gave us an exhibition run after a deer, which, however, escaped them and the rest of us by swimming the river. Then they chased a red fox all over the premises, but finally lost the scent and quit when the fox ran over some burnt land so they would be unable to trail him.

Returning to camp we all took a hand in the cooking, although there was but one artist on the job, and soon we had batter cakes, corn cake and other grub in the making, each one in turn minding the frying-pan, in order that the food might be served hot. The raccoon meat was parboiled and then put into a covered vessel and smothered over a slow fire for two hours, and at a later day proved to be delicate eating, as did the rabbits we caught on the run and the squirrels picked out of the tree tops on our way home from hunting bigger game.

While on the borders of the big swamp we saw where a bear had left his mark on a juniper, over six

feet from the ground, to indicate his bigness, and to serve as a warning to some bear who could not reach as high, not to trespass on his preserve. This bear had cut up all sorts of pranks with the trees and bushes near the spot where he had left his measure on the juniper. When we asked the trapper what it all meant he replied laconically, "Pure devilment."

We saw hundreds of tracks of the wild hogs on the ridges where they had come out of the swamp at night to feed on the mast and acorns scattered there. The wild hogs always bed down by day in the swamp and it is so dense with vines it is impossible to get a shot at them there even if the dogs do bring them to bay. Experienced dogs bring them to bay in the open, or one can camp on the ridges where they feed at night and get them by moonlight. The next morning we broke camp and ran on down the river twenty miles, tenting that night on a bluff grown in lowland pine. The view from that bluff was unusual. The river made an ox-bow in front of it. The shadow points of the great pines rested on the water, which was lighted up by the sun setting in an opalescent sky.

We used the river water to drink, as it is absolutely free from contamination and it all comes from springs which rise in the sand hills.

The Lumbee River is really a great canal, the waters of which run swiftly through a wilderness of timber, much of which has never seen an axe. The bottom of the river is of white sand or gravel, the banks are bold, the water being from three to ten feet deep right up to the tree line. The prevailing woods are cypress, gum, juniper, water-oak, maple and pine. The green of winter is afforded by the bay-bush, the ever-present

holly, mistletoe, and pine; and on the lower levels of this waterway the gray Spanish moss lends a charm to the river picture. The wine-colored juniper water against the gray cypress butts and cypress knees furnishes a contrast that is striking. Our tents were V-shaped or apex, made of light water-proof material. We set them up by pinioning the four corners and then tied the apex to a pole set in the ground directly in the tent front or doorway. This is a convenient tent for use when one is canoeing and wants to travel light and a night fire is needed. One of our party slept under a fly, stretched over two ridge poles that may have been four feet from the ground and seven feet apart. The corners of the fly were tied down beyond each ridge pole. This veteran camper did not sleep on the ground like the rest of us, but used a canvas stretcher and flattered himself he had the only outfit for camping and sleeping in the open air. He said he was done with tents and he showed us how the fly could be converted into a tent that would keep out the rain.

The day following the camp in the pines, by invitation, we went on a quail shoot, with local sportsmen who had dogs trained to the hour. We found plenty of birds, for this is a great quail country. We picked up ducks while on the river and woodcock, shot with a pocket rifle.

This is about the way we do it canoeing and camping in midwinter in North Carolina.

The beauty of this river trip is due to the fact, as much as anything else, that one can reach remote hunting and fishing grounds in a boat or canoe, can camp always on the banks of a little river, on bluffs as dry as a bone, where there is no mud and where

there are none of the insect pests of the north woods. The wild lands lying back of some of these bluffs equal more than 3,000 acres. The Lumbee and Little Pedee, into which it flows, are constant streams that wind in places in the ratio of three miles of water to one of land, with a current from three to six miles an hour. They offer a canoeing course 360 miles long.

There is no road half so clean and sweet, so ready for use, and so easily kept in repair as a little river.

Sidelights on Adirondack Mountain Tops

By

WARWICK S. CARPENTER

" . . . *so and no otherwise hillmen desire their hills!*"

WE SAT upon a jutting rock at the very summit of Indian Pass and looked back over the gorge up which the trail had climbed so steeply. Throughout the entire ascent our necks had craned around obstructing rocks and pushed through the thick fringe of green along the way, only to catch thin and fleeting vistas of the panorama. Then suddenly, like the well-ordered rising of a curtain, the veil of trees parted before all the wonderful setting of an ancient legend. As further support for the imagination, our seats overhung the very stage, like boxes in a theatre. But the play was not on. Through old He-no-da-wa-da of the Iroquois, Pass of the Thunders, streamed August sunshine. It filtered softly across the trail we had just quitted and fell unobstructed upon our comfortable seat. On the leafy mask of the

* Copyright, 1913, by W. S. Carpenter.

rock-strewn chasm it rippled gently, and reflected from the far side of the mountains beyond. From the perpendicular front of Wallface, towering hundreds of feet immediately across the gulf, it struck as from a mirror.

One could almost wish otherwise. At the scene of so much Indian superstition, where the surroundings themselves must have been chiefly responsible for the lore that arose concerning them, it required little effort to feel the incongruity of summer sunshine and Adirondack breezes. For this was Da-yoh-je-ga-go, to use another of its names, The Place where the Storm Clouds Meet in Battle with the Great Serpents. As Ga-nos-gwah, however, it was best known, the Ga-nos-gwah being the Stonish Giants of Iroquois fable. Indian Pass was their home territory, where not a warrior dared linger after dark. They were immense beings, clothed in garments of stone, and of fearful countenance. To look upon them was instant death, as in the Arabian Nights tale. But they were also cannibalistic, and when they planned to "destroy the Iroquois, make a great feast of them, and invite all the Stone Giants of the sky," the Great Spirit outwitted them and slew all but one. One tradition says that he fled to a cave in the Alleghanies, but I think rather that he returned to his old home in Ga-nos-gwah, and as incontrovertible proof thereof adduce many caves among the huge boulders at the bottom of the gorge.

If so, it was in one of these caves that a young brave, a chief of the Iroquois, who had lost the trail during a storm, took shelter, "blinded and bruised by the hail which fell like sharp flints."

"Night with its darkness deepened the shadows,* and the young hunter prepared for a night's sleep, when suddenly the rock began to move, and from a far recess a strange sound approached him. At one moment the tone was brisk as the gurgling stream, at the next gentle as the lullaby of a singing brook, again to burst forth like the moan of a tumbling cataract or the wail of a mad torrent, then dying away as tenderly as the soft summer breeze.

"During a pause in the weird harmony the marveling young hunter heard a voice addressing him in a stentorian strain, saying: 'Young warrior, beware! You are in the cave of the Stone Giant, Ga-nos-gwah! Close your eyes. No human being has ever looked upon me. I kill with one glance. Many have wandered into this cave; no one lives to leave it. You did not come to hunt me; you came here for shelter; I will not turn you away. I will spare your life, which now is mine, but henceforth you must obey my commands. I will be unseen, but you will hear my voice. I will be unknown, yet will I aid you. From here you will go forth, free to live with the animals, the birds and fish. All these were your ancestors before you were human, and hereafter it will be your task to dedicate your life to their honoring.

" 'Whichever of these you meet on your way, do not pass until you have felled a strong tree and carved its image in the wood grain. When you first strike the tree, if it speaks, it will be my voice urging you, and you must go on with your task. When the trees were

* From "Myths and Legends of the New York State Iroquois," by Harriet Maxwell Converse. Albany, N. Y. State Educational Department, 1908.

first set in the earth mould, each was given a voice. These voices you must learn, and the language of the entire forest. Now go on your way; I am watching and guiding you. Go, now, and teach the mankind people kindness, the brother goodness of all dumb things, and so win your way to live forever!' "

It is evident that the spirit of Ga-nos-gwah had become considerably softened in its solitary mountain refuge.

"When the young hunter opened his eyes, he was standing beside a basswood tree, which gradually transformed to a great mask and related to him its power. . . . With this knowledge he started on his way, carving go-gon-sa-so-oh (false faces). From the basswood he hewed them. By the voice of the Stone Giant he was guided to choose; and well he learned the voices of all the forest trees before he completed his task.

"Many years had passed in the laborious work, and he who entered the cave a youth had become a bent old man, when, burdened with the go-gon-sas he had carved, he set out on his return to his people. Year after year his burden had grown heavier, but his back broadened in strength, and he had become a giant in stature when he reached his home and related his story. . . . The lost hunter became the founder of the False Face Company and instructed the first band in its ceremonies and ritual."

One of the false faces used by the Company is now preserved in the New York State Museum.

After the long climb from Lake Henderson, Ga-nu-da-yu, Handsome Lake, to the summit of the Pass, and a little scrambling among the intricate mazes of

the gorge, one's imagination traces readily enough the real connection between Indian Pass and the old myth of the Stone Giants. It is immaterial whether the wildness and marked individuality of the spot furnished the foundation for the superstition, or easily fitted itself to it. For us this summer day, not "tiptoe upon a little hill," but supine upon the divide between the Hudson and the St. Lawrence, it could do neither except in fancy. We were in the very heart of hearts of the Couch-sa-ra-ge, The Dismal Wilderness. But how far from dismal! Instead, Couch-sa-ra-ge and Adirondacks are antonyms of connotation as divergent as alpha and omega. They point a complete reversal in point of view, the very reason for the ancient aversion constituting to-day the greatest fascination of this portion of the North Woods. This is the secret of the trick of imagination which revitalizes the old associations of Indian Pass. One must think by opposites, if one can on such a midsummer expedition.

Certain it is that "to one who has been long in city pent" the broad sweep of tree tops and mountain side from Indian Pass is singularly idyllic and beautiful. It is not an extended view, as extension goes from most Adirondack mountain tops, nor is there a single blue lake in the distance. It is just the essence of Adirondack woods and intimate mountain slope, with none of the austere formidableness of western mountains. Only the abrupt rise of Wallface is stern and forbidding.

The old Indian trail keeps well out of the gorge, along the rough side of McIntyre. There are overhanging ledges in its course, which it skirts cautiously. Some of them would give comfortable refuge from a

sudden storm. But our Indian boy, who had wandered astray, must have crawled into one of those in the bottom of the gorge itself. Here tremendous rocks have been thrown by titanic force, and among them are homes enough for all the stone giants of the sky. From deep in their crevices come tones "brisk as the gurgling stream," and "gentle as the lullaby of a singing brook." After a sudden storm they might well "burst forth like the moan of a tumbling cataract or the wail of a mad torrent." It is worth climbing down to hunt out an opening where one can dip up the ice-cold water. Here is one of the farthest sources of the Hudson, which leagues below runs upon slow, impeding tides, "forgetting the bright speed he had in his high mountain cradle."

Nearly all Adirondack mountains offer similar reward for more careful cultivation, but one must travel far from the beaten trail to appreciate them. There is Pharaoh, near Schroon Lake, On-de-wa of the Iroquois, interpreted Black Mountain, though another meaning, Coming Again, is probably more accurate. From its summit Pharaoh has quite a different appeal from Indian Pass. More lakes may be seen from it than from any other mountain in the Adirondacks. The sweep of the view is superb. It extends from the mountains behind Lake George clear to the serrated line of the Great Peaks, in which are Indian Pass, McIntyre, Marcy, Skylight, Dix, and all the other best-known summits. The slender thread of Champlain lies far to the east, and westward is a fringe of lesser heights. Immediately under foot are Pharaoh Lake and Gooseneck and Crane Ponds, and on all sides are other lakes of varying size. But aside from its magnifi-

cence, the prospect from Pharaoh is just what might be expected from such an isolated peak. It gives "wide wand'ring for the greediest eye." Another aspect of Pharaoh is more interesting to the lover of unusual and secluded pictures. Its western side drops sheerly and precipitately off into Desolate Swamp. From the edge of the precipice Desolate lies outspread in wild abandon. To reach it is a matter of much angling down treacherous slopes. But an intimate acquaintance with mountains is seldom easy. Beyond the rank grasses and sluggish, lily-padded pond-holes of Desolate the bluff mass of Pharaoh stands impressively, the sharp up-whipping of its precipitous sides strongly accented by the scrub spruces and balsams of the swamp. It is such a fascinating desolation as makes the promise of On-de-wa, Coming Again, doubly alluring.

The real climbing center of the Adirondacks is in the Great Peaks. Marcy, Tahawus, The Cloud Splitter, is the highest, and the objective of every vacationist who has fallen under the spell of these summits. From the western side the trail leads up through a most interesting country, crossing the Opalescent River at the Flowed Lands, just above Gui-en-dau-qua, The Hanging Spear, one of the most beautiful falls in all the North Woods, and just below Avalanche Lake, the highest sizable body of water in the Adirondacks. This is the Ta-ne-o-da-eh, Lake High Up, a recent and fanciful designation, which is more appropriate than authentic. Almost at the top is Lake Tear of the Clouds, nestling in a shoulder of the mountain, in which the Hudson finds its highest source. Stunted spruces line its farther shore, and above their

tops is the bald crown of The Cloud Splitter. One approaches the eastern side by way of the Ausable Lakes, a fitting introduction to the commanding presence of Tahawus. From the top, on a clear day, is spread the most magnificent panorama of the mountains.

Panoramas, however, are but one note in the call of the mountains. The peaks themselves are usually better studied from a distance, or from some point of peculiar vantage. Every changing position on the Ausable Lakes offers such an opportunity to grasp the real spirit of Marcy and his companions, and from each of the summits the others present a different profile. Of scarcely less dignity than Marcy, and no less interesting, are Basin, Haystack, Saddleback, Gothic and Saw Teeth, all worth climbing individually, and all arranging and rearranging themselves in imposing groupings. For sheer beauty, the view from Colvin, across Lower Ausable, is probably the most satisfying. From there the Basin takes on something of the configuration of the Jungfrau.

Even Haystack, least individual of all, is full of pleasant surprises from the Inlet above the upper lake. This is where "Metauk's haunted forest grows." The stream winds gently past overhanging alders and pointed spruces, with here and there a towering pine. Extended surveys are for the most part shut out, as is proper in any enchanted forest. But several times, on rounding a turn, the characteristic peak of the mountain jumps into the vista of the alder-bordered banks, at once vitally significant in the composition of the picture. One feels immediately that he knows it better.

ADIRONDACK MOUNTAIN TOPS

It is one of the most attractive of vacations, this personal study of the mountains. One should go leisurely, with a suitable camp outfit, such as I have described elsewhere,* and so be prepared to weather a day of clouds, of driving rain, or of veiling mist. Each develops in the old peaks a different mood. And every changing temper drives deeper into the bone the desire of the hillman for his hills.

* Outing Magazine, December, 1912.

Photographic Pointers from a Professional

By

C. J. GREENLEAF

IT IS wonderful to see how well satisfied the average kodaker is with two or three films that show fair negatives out of say ten exposures. He does not seem to consider that the film that shows no picture, or only a faint trace of one, had all the possibilities of the good results, before exposure. Why does he not inquire into the causes of such failures and seek to remove them? To aid him to do this, in some slight degree at least, is the object of this article.

THE LENS

Let us suppose that you have resolved to buy a Kodak. Put all the good cash that you can afford into the lens. Never mind about shiny leather, nickel plating, and all that. They cannot make the picture. But the lens must see and transmit an image to sensitive film with marvelous quickness and exactness.

* Copyright, 1913, by C. J. Greenleaf.

Photo by W. S. Carpenter

INDIAN PASS, FROM LAKE HENDERSON

Photo by W. S. Carpenter

LOOKING SOUTH FROM SUMMIT OF INDIAN PASS

It should be double-objective—consisting of a front and rear lens; rectilinear—giving straight lines, perpendicular and horizontal across the field that it covers; anastigmat—giving a sharply-defined image to the margin of the plate that it is listed to cover. It should also have a nearly wide-open diaphragm or stop.

Now a good start has been made. Of course this lens should be fitted with a reasonably fast shutter. Unless you intend to go after very fast-moving subjects, 1-100 of a second as the greatest speed-limit is fast enough.

SIZE OF PICTURE

The 3A series of the Eastman Company, making a print 3½ x 5½, is the most desirable size on the market. This instrument is very compact, light, strong, easily and quickly adjusted, and gets good results. The pictures conform to the popular post-card size. They can readily be seen without the aid of a microscope, and are convenient for reasonable enlargement.

With such a lens as here described, admirable results can be obtained. The usual roll film can be used, or the film-pack. With plate adapter the advantages of ground glass and plates can be secured; and where possible, certainly by the beginner, the tripod, ground glass and plates should be used.

Of course many use smaller cameras with good results, but defects that are easily overlooked in a small picture become very ugly when enlarged, and anything smaller than the post-card seems too much on the "chicken-feed" order.

If you do not secure good pictures with such an outfit as described, the fault will probably be your own; and now let us see if we can point out some of the most common mistakes into which amateurs are led.

"YOU PRESS THE BUTTON, WE DO THE REST"

This familiar catchword is chargeable with many failures. It has been dinned into the ears of camera-buyers so persistently. Nothing to do but press the button and keep on pressing, and the "we-do-the-rest" people generally do it—and "do" the poor amateur into the bargain. Slap-dash! Into a tank; soak awhile; out; into the hypo; out; hit-or-miss—bang! And when the results are viewed, "the rest" looks the poor button-presser in the eye and charges him with every failure. I saw a sign not long ago, "Amateurs Finished," and when one looked at the samples of the *finisher's* work, verily the sign was justified! If you cannot do your own finishing, go to the best man you can find and be willing to pay a fair price.

Then, too, something should be done before the button is pressed, or at least before a film is exposed. Rehearse. Become familiar with every move and know just why you do a certain thing. If you must focus by a scale on the camera, learn all about those distances; pace them off, stepping three feet to a stride. Or, better yet, use a tape measure until you can judge distance with some degree of accuracy. Many exposures are made out of focus. Get well acquainted with diaphragm and shutter. Get so that you can hold the camera still. If possible, use tripod

and plates first. Don't hurry. Go at it very deliberately. Make a view from a certain point; get a print from the negative; then go back and study view and print from the same point. See if you couldn't have found a better viewpoint. Let the eye swing over the view obtained and over the angle covered in the landscape. By doing this in a few instances you will soon come to know very nearly where to plant your camera to cover a certain field of view. Get the same general view from different points, with different lighting and exposures. A few drills of this kind will do one more good than blindly pressing the button all summer.

A machine has been defined as "something too stupid to make a mistake." This is not true of the average human being; but when one has learned to work his camera with little conscious thought, he can give his entire attention to the problems that every picture presents for solution. Then when among views that you really care for, don't trust to luck. Be sure that everything is in working order. One of my good friends while on his vacation last summer thought he was exposing roll after roll of films on subjects that he greatly desired. The result showed that his shutter never budged. He pressed the button all right, but plenty of brains should have been mixed with the pressing.

THE SPEED CRAZE

This is a serious fault of nearly all amateurs. It seems to be an obsession with them in about the same degree as with the average "auto fiend." A rapid shutter seems of far more consequence than a good lens. We hear them boast of exposures of 1-1000

part of a second! And then they sigh for a faster shutter. Makers of shutters have been driven to make these articles so that the exposure is considerably longer than the figures on the scale indicate. The speed craze has ruined more pictures then even the "amateur finisher."

In writing this article I am compelled to refer to my own experience, for it is about all I know. I have been engaged in professional photography for about forty years, commencing with the wet plate, and about the time when photographs were first produced commercially. In my outdoor work I have a shutter that has a speed-limit of 1-100 part of a second, but I do not think I have used that speed twenty times in as many years. Unless obliged to give time less than 1-5 of a second, I always use the cap from preference. My rule is to give plenty of time, overtime rather than the reverse. A print from an overtimed negative is not unpleasant—a little flat maybe, but delicate and clear. But the muddy blacks and chalky whites of an undertimed negative are certainly something to be avoided.

HOW TO JUDGE TIME

This is a hard problem until you can "feel it out." A class in photography was once asked, "You have a white horse and a black one to take together; the black should have three seconds, say; the white, one second. What time would you give?" It caused much discussion. Finally a middle-aged man said: "I used to make pictures down South. Often I had groups of white and black children together. If I timed for the white ones, the little coons were lumps of soot. But

if I timed for the black ones, the little white fellows took care of themselves and came out all right. So I always time for the nigger." Of course. And the rule of every photographer should be, "Time for the shadows." When ready to expose, look for the darkest shadow and *give time enough to secure detail in that shadow.* (But you can't always do it.)

I was once making views in a nursery. "I would like a view from about this point," said my attendant, "showing clear down these long rows of trees." And this was the problem: The rows were long. Stop down, give plenty of time, and thus get them sharp. Those large, dark green leaves also require plenty of time. But the breeze kept the slender limbs in constant motion and the leaves were in a flutter. Must give quick time to get limbs and leaves sharp. A compromise was necessary. Focus sharp. Work with as large a stop as one can use and secure definition. Wait until the breeze lulls a little and give 1-25 of a second. Got a good one. It is in such cases as this that the good lens counts. It gives good definition over the entire plate and still works so rapidly that waving leaves or flags seem absolutely still.

It is a great handicap not to develop and finish your own exposures. Frequently a day's work of plates may vary in time of exposure from 1-25 of a second to ten, twenty, or thirty minutes. In such cases comes in the fine work of developing, and, later, skill in printing. But that is another story that I may tell some other time.

POINT OF VIEW

Very many photographs technically good are simply good for nothing because they say nothing, tell no

story. A publishing firm wrote me: "We want pictures of good farm buildings and farmhouses. These photos must tell their own story, something that will be interesting and instructive. A pretty outdoor view means nothing. If it shows a man at work weeding onions, then it has value."

You must learn to see this value. Learn to see the view before you, or that part of it which the angle of your lens will include, and as it will look in the finished photograph. See that the light does the subject justice and comes from the right direction; that it is strong enough to give sparkle and snap; that there is a sense of balance and harmony. Except in wild, lonely places, a touch of human interest adds greatly.

Will you stand for one more experience? A real-estate man wanted some views of his development. I took the lens that always seems to do a little more than one can expect of it, the solid old box that I have lugged twenty years; rising front of over three inches; swing back of about the same latitude; plenty of side-swing, too; bellows same size all the way; two dozen 8 x 10 plates. Weight, over forty pounds. Used to it.

Big, pompous fellow. Knew what he wanted. Didn't want suggestions.

"Want that bungalow. Get up close. Fill the plate. That will show it up."

It surely did—a lot of building debris scattered about. He on the porch staring the lens out of countenance. *Waugh!*

"Want this water. Get that clump of trees next from about here. Better get the station good and big."

And so on for the day. He was shown a finished set next day. He looked them over carefully.

"Good for nothing," he said.

"Why?" I asked innocently.

"Nobody would buy property from these. Your work is all right, but there's nothing to 'em. What's the matter?"

"They tell no story," I replied; "have no feeling, no human interest. Nothing to interest a city dweller."

He looked at me a moment in silence.

"Miss Roberts, write this man a check. Can you meet me at the property next Thursday morning?"

He was on hand. A horse and buggy with driver stood near.

"Morning! That man knows the property as well as I do. He goes where you say. I don't want to see you again today. Skidoo!" But he grinned a grin of understanding.

Ah! this was something like. "Drive to that bungalow by the lake, John." (The same one we took so as to "show it up.")

"Not too close, now. That beautiful old apple-tree in full bloom will hide the raw newness. Let it conceal all but the porch; that hints of comfort. The huge rock a little way back, covered with lichens and vines, works in fine. The shelving sward stretches down to the water. The woods make an ideal background.

"Oh, John, please drive down by the water and yell to that boat-load of young people and ask them to come ashore."

He turned the horse partly toward the camera, where he fitted in well. The boat drew near. Some white dresses. When almost ashore the rower ceased

his labors and the pretty waves came rippling up the low strand. Now!

Bluff said the picture sold the property. Caught the station with train coming in; waiting passengers, carriages and autos; the old rustic bridge in the foreground; the white bungalows in the middle distance; and the fine sweep of the "development," away back to the softly rounded hills. I found a little winding path that had been worn through that "clump of trees," put it to one side of the view, got John to "peel" down to his shirtsleeves, shoulder an ax and trudge away from the camera a la Millet peasant. And those old willows that drooped over the pretty stream and the rough bridge served a good purpose. The barefooted boy leading the fat family horse willingly stopped and looked earnestly for minnows. And so on for the day.

Good pictures are worth all the trouble it takes to secure them. Climb hills, stairs, freight-cars. Don't try to see how many you can take, but how good. Don't be satisfied with just photographs. Get pictures that say something. And don't try to get them in the millionth part of a second. When at work on busy streets, people always ask, "Do you give time?" "Can't you make 'em instantaneous?" And when I tell them I give plenty of time and confess that I don't know what an "instantaneous" exposure is, they leave me with looks of pity.

PROBLEMS

I wish I knew more about the problems you meet. But one of the fascinations of the business is the solution of them. And certain ones must be met and solved with every view taken. I have never made two nega-

tives exactly alike. Really we must work until we feel out these problems and know what they are and how to meet them. Here is one that a friend gives me:

"We had a 3A Kodak especially equipped with a Zeiss lens. We found that, in taking pictures from a canoe, we had to have our speed set at 1-50 of a second in order to eliminate any traces of motion. When the speed was set at 1-50, however, we almost invariably found that our pictures were somewhat inexposed."

Tough proposition. Good lens, fine conditions generally. I always dread to work from a little cranky boat. And a canoe—the motion is so gentle, without jar or friction, and is usually much greater than one estimates. In such a case I should work the lens nearly wide open, take pains in getting the focus nicely adjusted, right on the object of interest. Stand or sit in the middle of the boat, set shutter at 1-50, say, and let it go. If I had a number of such exposures on one roll, I should mark it and tell "do-the-rest" man to take special pains, use a weaker developer, etc. I would suggest that the views be taken partly toward the bow or stern rather than at right angles to the line of progress. This would partly compensate for the forward motion of the boat.

In working from a moving object, or if the operator allows any motion of the camera during the time of exposure, it counts vastly more than a slight motion in the object photographed. If the front sight of a gun is a little out of line with the rear sight and the object aimed at, the bullet flies wide, while the object aimed at might move considerably more than the front sight and still receive the bullet. And if you have an anastigmat lens, working with a large opening is no

detriment. You may not get the microscopic sharpness, but the soft, fine effects more than compensate.

On a vacation trip with the camera, be sure that everything is in perfect working order. Have a few rehearsals. Don't hurry. Know why you do things. The views taken are practically worthless unless they tell the story of the trip and in a pleasant manner. If you wish that pretty woodland scene just above where you camped, get it when the sunlight is filtering down through it, or when the shadows are long and the scene is quiet. Get a pleasant balance of light and shadow, wood and open. If there is a path or an old wood-road that comes from nowhere and goes to the same place, let it lie to one side as if it happened along. If in the middle of the view it becomes too conspicuous and tends to divide the picture into sections.

Water and forest are rather difficult subjects to get together, yet just what we must have. The first is quick photographically and the second slow. Compromise a little, but time for the forest. A stretch of water with a sharp shore-line in the foreground is wholly unattractive. Get in a boat; someone fishing. Try to get it so that the shore-line curves away in the distance.

Of course you must get the camp. Wait till the light is right and your companions are sitting around just as you wish them, then press the button without saying a word. It is not difficult to make separate portraits or groups. It is best to use a tripod. Take pains and work deliberately. If you really wish to get the best you can in this line, it is best to use the portrait attachment, but it is not wholly essential.

A thick growth of underbrush, an old rail fence, or a fairly steep, wooded hillside make fine backgrounds. Only don't pose your subjects too near them. Let these accessories be well out of focus. It is not advisable to place your subject in the sunlight. The effect is usually hard and spotty and the contrasts of light and shade unpleasant. Select a spot where the light is soft and diffused. See that the light is a little stronger on one side than on the other—just a soft, diffused shadow. This will give you a pleasing picture and one that will bear enlarging. And while on the subject, a hammock, with proper accessories, makes a fine outdoor picture.

If really interested, why not take some cheap curtains or draperies along, with a piece of white stuff for a reflector. A few such things carefully selected, would give fine results, and almost endless variation and interest.

If you are an incurable "fiend," there are often some charming views you might get after the sun has departed. Take along a few flashlight sheets. They give a soft, broad light of about a second's duration, and are safe and convenient. All that is necessary is to take the flashlight holder, slip in the sheet, where it is retained by the spring-clip, hold where it will light the subject properly, and light with a match. The holder is lined with asbestos, so that the hand is protected. Do not stop the lens too close, as the tendency is toward harshness at best. You can also get cartridges that give an instantaneous flash.

One beautiful phenomenon of nature is generally ignored by photographers—that of the clouds. Did you ever pass a vacation without seeing the most won-

derful cloud-effects, something you never dreamed could exist? Great thunderheads, beautiful, fleecy creations as white as snow; dark, storm-driven clouds? When getting your outfit see that it includes a yellow screen; the medium color will do. With small cameras it slips on the lens like a cap. Place your camera on the tripod, get up on a high hill or on a roof, focus on the clouds, and give about five times the exposure you would if not using the screen. You can often get fine cloud effects by giving a very short exposure without the screen. It is easily done when the clouds are dark and there is no blue sky. With blue sky and white clouds, use the screen to cut out the blue. You can also use the screen when photographing some landscape and thus secure both clouds and scenery, but you must give about ten times the usual exposure.

In conclusion, I admit that I am not much of a fiend with the kodak. I much prefer that you should hire a professional to do your work. Still I can appreciate how many fine views may be secured with a good outfit combined with a little knowledge of the principles involved. Thus the vacation or trip you enjoyed so much may be lived over again as you turn to your treasures. And if this article will help ever so little on some future trip, then a grouchy old professional will feel that he has "given time" when the conditions were right for a successful exposure.

The Boy Scouts of America

By

DAN BEARD

ONE finds no history of the picturesque scouts employed by the Union army. There were probably only a few of these men, but their work must have been important, because I remember they were treated with the utmost respect by every one in the army, from the commanding general to the drummer boy; and no character outside the covers of a story book ever made stronger appeal to the imagination, awe and admiration of the small boys in the beleagured town than did these men.

These scouts were tall, upstanding men, slender and straight as Indians; their hair was usually blond, and, like General Custer's, it reached to their shoulders. In place of the stiff, regimental hats, turned up on one side and ornamented with various brass eagles and crossed sabers, these men wore soft, broad-brimmed, black hats, with hatbands of thick, black and gold-braided cord, terminating in acorn tips. On one side

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a long, graceful ostrich plume drooped over the back. Their uniform seemed to have been chosen by themselves, for they were dressed in black silk velvet, they wore shoulder straps showing the rank of a field officer, their hands were incased in yellow buckskin gauntlets, with extra long and expansive cuffs. The gold cord of a staff officer ran down the seam of their wide, "pegtop," black silk velvet trousers, the bottoms of the latter being crowded into the morocco tops of kid-footed boots; to the high heels of the boots were attached large wheel spurs, with dangling pendants which jingled as they walked. When they wore a saber, it was usually incased in a silver scabbard and hung so low that it dragged and jangled over the brick pavement.

These men were the war scouts—who at a moment's warning doffed their gay uniforms and disappeared over the lines, often making their way through the enemy's country from one end to the other, and occasionally being caught and hanged. But it was not the war part of their life that fascinated the boys or made us follow them at a respectful distance. There were soldiers, officers and fighters everywhere around us. The blue uniform was so common that civilian's dress was a novelty. Even the boys on the street were dressed in the uniform of the United States soldier. But we worshipped these particular scouts because we knew they were recruited from the plainsmen and mountaineers of the West. It was because they were great in woodcraft, great in forest lore; because an atmosphere of mystery surrounded them—an atmosphere which suggested snow-capped mountains, wide-rolling prairies, and deep, dark forests; it was because

we looked upon these men as the lineal descendants of those sturdy scouts of the middle West—Daniel Boone, Simon Kenton, the long-haired Wetzels, George Washington, George Roger Clark, Christopher Gist, Davy Crockett and other wonderful men who were the product of the frontier and known as American scouts. It was because these men were to us the reincarnation of the old buckskin knights that they excited our awe and admiration. Those men inspired the boys to organize groups and call themselves "Scouts," "Indians" and "Pioneers."

In those days the school teachers, the policemen and male relatives were either wearing the blue uniform as soldiers or were out at the front digging trenches, and only the poor, worried mothers remained at home. Consequently the boys had plenty of time and opportunity to play "scout," throw the tomahawk and study woodcraft, in all of which occupations they were aided and abetted by the soldiers. It is not strange, then, that the name "scout" was selected, after thirty years of study and experiment to find a name which would excite the enthusiasm and make the strongest appeal to the imagination of the American boy.

In 1910 the present society of Boy Scouts of America was organized by Lee F. Hanmer, of the Playground Association of America; George Dupont Pratt, of Pratt Institute; Jacob Riis, of Riis Settlement; W. D. Boyce, publisher; Luther Halsey Gulick, M. D., Russell Sage Foundation; Ernest Thompson Seton, naturalist and author; Edgar M. Robinson, secretary of boy's work committee, International Y. M. C. A.; Colin H. Livingstone, of the American National Bank, Washington, and Dan Beard.

We think we have solved a great problem in the handling of our boys; we know we have inaugurated a tremendous revolution and crusade which are spreading and have spread all over the world. We think we have a right to assume that the religious people of all denominations must agree with us in our belief in the Fatherhood of God and the brotherhood of man, and we assume that all Americans and all people who have emigrated to our shores, whatever their political or economic beliefs may be, must also indorse the corollary to the foregoing, the preamble to the Declaration of Independence, "We hold these truths to be self-evident, that all men are created equal," etc. These two articles contain all the religion and all the politics which are required of the scouts by headquarters. The details of their religion and politics can be safely left to their parents.

All teachers know that the boys want ideals to embrace, that they are in search of thrills to excite their enthusiasm; hence our problem is reduced to this: Boys seek excitement and danger; boys love adventure; boys demand heroes with red blood who have performed picturesque feats. How can these demands be satisfied in a sane and moral manner? Fortunately for America, such characters exist in our history and were developed on our own frontier. They were the scouts of the middle West, the buckskin knights; they were wonderful woodsmen, splendid examples of physical manhood, men of great achievement, lofty moral character, and they were empire builders.

Jonathan Chapman was a great wilderness scout, but he never lifted his hand to harm man, bird or beast. "Scout," as used by us, is not a military term;

hence it is we have the indorsement of the Quakers, the peace people, as well as all those who love and believe in boys. It was said of Wild Bill that a man could trust him with his money, his wife and his honor, with certainty that all would be safe. We are teaching the boys this same high sense of honor, without teaching them the necessity of shooting each other. It is our firm conviction that the country which has the most Boy Scouts today will be the greatest country tomorrow.

The idea of boys' camps did not originate with the Scouts, but the Scout system has done much to make that idea popular. The instruction given in practical details of camping and woodcraft is also probably more organized and more thorough in the Scouts than elsewhere. As an example of what is taught I have selected the construction of a log cabin.

Every normal American boy with any sentiment in his soul loves a log cabin. The log cabin is so intimately connected with the history of America that it deserves a place on the coat of arms of the United States. All our ancestors lived in log cabins, many of the great men of the last generation were born in log cabins, and so, whenever we find a troop of scouts located where there are woods and trees plentiful enough to be available for logs, we encourage the scouts to erect their own club houses and do all the work with their own hands.

In order to build a log house, a scout must learn how to wield an axe. The Americans have long held first position in the world as skilled axemen. I have lived in the wilderness in a log house furnished with comfortable beds and even rocking chairs, all of which were

manufactured from the standing timber, with no other tools than an axe, an auger and a hunting knife. First, the scout learns how to cut down a tree and by so chopping the trunk that the "kerf" on one side is a short distance below the "kerf" or notch on the other, causing the tree to fall in the direction most convenient to the young woodsman. He learns to clear away the underbrush all around within reach of the swing of his axe, overhead as well as on the ground, and thus prevent these objects from deflecting the blow of his axe. He learns not to try to fell a tree against the wind; he learns never to stand behind a falling teee, because he knows that the butt may "kick"—that is, may shoot backward—ofttimes with serious or fatal results; he learns how to split a log, to make puncheons by flattening one surface of a log—cutting notches along the surface and then splitting off intervening pieces of wood.

When the logs are trimmed of their branches, he knows that, if he wants the cabin to last for years, the bark must be peeled from the timber, as the bark not only holds moisture, which rots the wood, but it also harbors the boring insects that destroy the timber. He knows that if the bottom logs are set upon stones, elevating the floor above the ground, they will last much longer than if allowed to rest upon the damp ground. He also knows that, if he measures six feet along one log from a nail head where the corner log is joined and marks the point, and then measures eight feet along the other log from the same nail head and marks the point, if the corner is square, a ten-foot rod will just fit diagonally between the two points marked, and, if not square, it may be made so by adjusting the

logs until the ten-foot rod touches the two points. He knows that to pile the logs on top of each other without notching them would make the spaces between the logs as large as the logs themselves, so he notches the logs in the backwoods style or flattens the ends of them in General Putnam style or dovetails them in Canadian style; then, if his timber is comparatively straight, the spaces between the logs are so narrow that they are easily chinked with moss and mud.

He learns how to split a log with a free or broad-axe into flat pieces of wood, known in various parts of the country as "shakes," "splits" or "clapboards," and he knows how to shingle his house with them. These things he has learned from his scoutmaster or from his "Field and Forest Handy-book." He knows that he must build the four walls of his house before cutting out the window spaces. When he is ready to make these openings, he nails a temporary framework for the doors and windows on the outside of the logs, then inside of this framework he saws out an opening. The reason for this is that the planks nailed on the logs will hold them in position and keep them from sagging down in an unsightly manner. They are permanently held in place when the window frame and door frame are nailed against the sawed-off ends of the logs, after which the temporary boards are removed.

Thus he erects his little home club as his pioneer ancestors erected theirs, when a blanket of forests covered this continent from the Atlantic Ocean to the Western prairie, and when the panthers, wolves, wild cats, elk, deer, buffalo, antelope and Indians were plentiful and gave touches of picturesqueness and danger which appealed so strongly to the adven-

turous spirits of the pioneers. Although the animals and the Indians and the danger are now lacking, a little log cabin in the woods suggests to the boy all these things, and his highly developed imagination supplies imaginary Indians, wolves and panthers.

The furniture of this little cabin is also made by the scouts themselves; there are rustic chairs, bunks and lounges made of the sticks cut in the wood, of boxes and barrels. This furniture appeals to the boys' sentimental nature with greater force than do the rich trappings and upholstery of any palace.

Of course these cabins should have an open fireplace, with a hearth of pounded clay or flat stones and a chimney built of short logs lined with clay or rough stones, or even barrels set one on top of the other. A stove will keep the house warm. Since all the heat of the stove is expended in the room and not up the chimney, as it is in an open fireplace, it will heat the house better than burning logs on the hearth: but, as the boys would say, "Gee whiz! Who wants a stove when they can have a crackling wood fire?" There is no sentiment or fun contained in a hot iron box; and as for an oil stove, that's a thing that belongs in a crowded tenement house and not in the open, in God's own country.

The old-fashioned, strenuous effort to force into the young minds of our lads an unnatural, artificial sentiment for things in which they were not interested has proved a dismal failure. The scout movement is developing the boy along the lines of the natural boy's activities, and the scoutmasters are not so much teaching the boys what to do as they are learning from the boys themselves how best they can develop

usefulness, efficiency and real happiness. To be of use, one must know how to do things, and the more things one knows how to do and the more things one does, the more useful he is to the community. To learn how to do things means to develop skill, and skill means not only development of the muscles, but also development of the mind.

The old-fashioned method of attempting to develop the mind independent of the body is as disorderly an idea as it would be to begin at the roof of a house in order to build it. The Boy Scouts of America, rich and poor, are encouraged to do things themselves. This teaches them not only the dignity of labor, but the necessity of labor for a healthy and normal development of physical and mental efficiency.

The Camp Fire Girls and Camp Wohelo

By

MRS. LUTHER H. GULICK

WHY the name "The Camp Fire Girls" for this organization? For the same reason that the organizers of the Boy Scouts decied on that name for the boys: because it was believed they would like it. Scouting is a masculine activity; keeping the fire burning in a camp or in a home is a feminine activity. The word "camp" symbolizes the outdoor spirit of the organization. Boy Scouts and Camp Fire Girls go together. But the Camp Fire Girls is not patterned after the Boy Scouts. It has been worked out for girls.

A girl in joining becomes first a Wood Gatherer, next a Fire Maker, and then a Torch Bearer. There is

* Those interested in making further study of the Camp Fire Girls movement, or in organizing a club, should address the Secretary, 118 E. 28th St., New York City. The portion of this article dealing with the movement, as distinct from the summer camp, is here reprinted by express permission of the "Ladies' Home Journal."

a natural sequence in the arrangement of these orders. Before a girl joins she must read the purposes of the movement, or have them explained to her, and she must learn and repeat the following lines: "It is my desire to become a Camp Fire Girl and to obey the Law of the Camp Fire, which is to

Seek beauty,
Give service,
Pursue knowledge,
Be trustworthy,
Hold on to health,
Glorify work,
Be happy.

"This Law of the Camp Fire I will strive to follow."

The next rank, that of Fire Maker, takes three months of preparation, unless the girl is in a camp or gives her entire time to preparation. She must indicate her understanding and love of the Camp Fire ideal by learning and repeating the "Fire Maker's Desire," which is:

As fuel is brought to the fire,
So I purpose to bring
My strength,
My ambition,
My heart's desire,
My joy
And my sorrow
To the fire
Of humankind;
For I will tend,
As my fathers have tended,
And my fathers' fathers
Since time began,
The fire that is called
The love of man for man,
The love of man for God.

The other requirements for Fire Maker are the following:

(1) *a.* To help prepare and serve, together with the other candidates, at least two meals for meetings of the Camp Fire; this to include purchase of food, cooking and serving the meal and the care of the fire. *b.* Two meals prepared in the home without advice or help may be substituted.

(2) To mend a pair of stockings and a knitted garment, and to hem a dish-towel.

(3) To keep a written, classified account for at least one month of all money received and spent.

(4) To tie a square knot five times in succession correctly and without hesitation.

(5) To sleep with open windows or outdoors for at least one month.

(6) To take an average of at least half an hour's outdoor exercise daily for not less than a month.

(7) To refrain from soda and candy between meals for at least one month.

(8) To name the chief causes of infant mortality in summer, and to tell how and to what extent it has been reduced in one American community.

(9) To know what to do in the following emergencies: *a.* Clothing on fire. *b.* Person in deep water who cannot swim, both in summer and through ice in winter. *c.* Open cut. *d.* Frosted foot. *e.* Fainting.

(10) To know the principles of elementary bandaging, and how to use surgeon's plaster.

(11) To know what a girl of her age needs to know about herself.

(12) To commit to memory any good poem or song not less than twenty-five lines in length.

(13) To know the career of some woman who has done much for the country or state.

The candidate must also present twenty Elective Honors.

In order to aspire for the degree of a Torch Bearer the applicant must have been a Fire Maker for at least three months unless she devotes all her time to preparation. She must learn and repeat the "Torch

Bearer's Desire," which is very short but means a great deal. It is:

> That light which has been given to me
> I desire to pass undimmed to others.

There are other things the applicant must do similar in character to the requirements of the Fire Maker. When she has attained to this rank, she is a leader and an assistant to the Guardian of the Fire. The Guardian of the Fire is the woman in charge of a Camp Fire; she gets her certificate to become a Guardian by sending to the Headquarters of the Camp Fire Girls for her papers. This is necessary in order to guard against persons going into the work who are not fitted to lead girls.

Camp Fire girls have an official costume, which includes a skirt and a blouse for street wear, a ceremonial costume, a bathing suit, an outing hat, walking shoes, a winter mackintosh and a sweater. All of these may be purchased ready-made with the exception of the ceremonial costume. The skirt for street wear is a dark blue serge. This material and color were chosen because nearly every girl owns a dark blue skirt. The blouse to be worn with this skirt is practical and becoming, and it is suitable for street and school wear. On the right sleeve is worn the emblem denoting the rank of the wearer. Other emblems, designed in silver, for the different ranks may be worn: a silver ring for the Wood Gatherer, a silver bracelet for the Fire Maker, and a silver pin for the Torch Bearer.

These costumes and emblems are not necessary in order for girls to become Camp Fire Girls—they are

for those who want them—but they will add greatly to the interest and purposes of the organization.

Besides the different ranks the girl attains there is a system of Elective Honors. These are divided into seven groups: Health, home craft, Nature lore, camp craft, hand craft, business and patriotism. There are upward of two hundred honors given in this way. For instance, a girl gets an honor for being free from colds during two consecutive months during the winter, or for not missing school or business for three consecutive months because of ill health. These are habit-forming tests. Honors are given for keeping well and for doing the things that will bring this about. A girl receives an honor for doing the cooking in a home for a month; this is putting the knowledge of domestic things received in school into practice. A girl receives an honor for being able to tell five standard folk stories; this is getting practice in the art of entertaining. She receives an honor for doing the work in a successful garden, for making a shirtwaist, and so on through the seven groups. The honors for these different groups are given in the form of beads, a different colored bead being given for each group; so that a girl may win seven chains of beads, each bead standing for a real accomplishment. The beads are worn at the council fire held once a month, and form a part of the ceremonial costume.

The home and the school have been the great character-forming agencies for boys and girls. The Camp Fire Girls is an agency for showing girls how to form their own characters. Children in their plays do in miniature the things they will do in adult life. The girl plays with her doll, preparing herself in the spirit

of play for the care of the most precious gift of her life. For making a doll's house of four rooms and furnishing it, a Camp Fire Girl receives an honor. For a girl to have made a doll's house and furnished it is real preparation for the home she is to plan and furnish.

Girls must be given opportunity to rehearse in play the activities they will be engaged in later in life. Boys must play with other boys in order to be trained to deal with men when they are grown. The value of team plays for boys is inestimable in developing a capacity for working together in fairness and for the good of all. Women are only beginning to play team games; and very good discipline it is, for woman, too, must learn how to work in common with others. But of more racial importance is it for woman to get training along domestic lines in a play spirit. That is the reason the Camp Fire Girls are adding romance and adventure to their program for the girls. A girl goes to the lake, to the river, to the woods, with her friends and cooks her dinner in good, primitive style. It is just as essential for girls to cook over an open fire outdoors as it is for boys to play their team games; it is giving the girls in play the lessons they need to learn.

There are all kinds of things to be rehearsed in play: cooking and sewing, weaving and dyeing, washing and ironing; and all that is done in the home can be learned in play before the task of a real home is undertaken. To make this possible is a fundamental idea of the organizers of the Camp Fire Girls.

It was important that this movement should have the most expert help possible in its formation, and this was secured.

The work has good financial backing by persons who believe in this plan for giving girls the things they so much need and want. Without this financial support the work would be hopeless.

The program has been made to meet the needs and possibilities of the girls in all parts of the country, for girls who come from wealthy homes and for those who must work for their living; it is for the city girl and the country girl; in short, it is for all girls.

The watchword is "Wohelo," made from the first two letters of the words Work, Health and Love. The cheer is:

Wohelo for aye, Wohelo for aye,
Wohelo, Wohelo, Wohelo for aye;
Wohelo for Work, Wohelo for Health,
Wohelo, Wohelo, Wohelo for Love.

The music for this cheer is in the Camp Fire Girls' book.

Camp Wohelo (formerly Camp Gulick), at South Casco, Maine, is giving young people true and lasting friendships; it is conserving physical health and vigor, and in a well-regulated camp there are interesting things to do all the time. It is located on Lake Sebago, not far from Portland, and its membership is at present limited to thirty.* At Wohelo the girls learn about the history and early life of the North American Indian. It is the Indian who has given us the idea of the ideal out-of-door man. Such camps as we have in America for boys and girls do not exist in Europe or in any other land. We have not given the Indian credit for all that he has given us. He gave Longfellow

* For particulars address Mrs. L. H. Gulick, 11 W. 88th Street, New York City.

the idea of Hiawatha, the rhythm of which reaches the heart of every boy and girl and every man and woman wherever the English language is read. The Wohelo maidens learned to make Indian jewelry and bead work, and each one made an Indian costume. They studied Indian symbolism and worked out original designs on their handicraft work. They constitute themselves a band of Wohelo maidens and wear their Indian jewelry, bead-work and costume at their council meetings, which are held once a week. The council meets in a quiet place in the nearby woods (where fire-wood is previously prepared for the camp-fire). The maidens come quietly to this place at the appointed hour. The meeting begins with the singing of the Omaha Tribal Prayer, then all are seated in a circle about the fire. The fire is started in the primitive way with the rubbing of sticks, after which the Indian roll is called (for each maiden had an Indian name). At these council meetings the maidens report what they learn during the week about the various tribes, a tribe being assigned each group of maidens. After this the "count" of the week, often written in the rhythm of "Hiawatha," is read. Then comes the awarding of honors. Honors are given for work in Nature craft, campercraft, handicraft and athletics. As soon as a maiden has identified her twenty-five birds, trees, or flowers, or has taken her test in swimming she is given an honor. At the last meeting the maiden winning the greatest number of honors is given the "buffalo robe," a large skin with pictures painted on it representing the various events of the summer and the individual symbol of each of the maidens. This she retains until the following summer,

when it is returned to have that summer's circle of events painted on it and to be won by another girl. The council meetings end with the singing of the camp songs, the last being the following "Good Night" songs:

(*a*) Now our camp fire's burning low,
Wohelo, Wohelo,
Father, bless us ere we go,
Wohelo, Wohelo.

May the lessons we've learned here
Wohelo, Wohelo,
Make our path through life more clear,
Wohelo, Wohelo.

Round Wohelo night shades fall,
Wohelo, Wohelo,
Now, good night, God bless us all,
Wohelo, Wohelo.

(*b*) The sun is sinking in the west,
The evening shadows fall,
Across the silence of the lake,
We hear the loon's low call.
So let us all the silence keep
And softly steal away
To rest and sleep until the morn
Brings in another day.

There is usually a new song to sing at each council meeting. Once or twice at the council meetings the maidens lie down about the fire and listen to the sounds about them. The impressive silence is broken now and then by the loon calling his mate and her answer from the distance, or by the chirp of a lonely bird in the tree top or the whirring of insects. The watchwords of Wohelo are work, health, and love. It is from the

first two letters of each of these words that the camp name is derived.

The following lines are taken from the summer count, which was written after the first council meeting:

Seated 'round their new made fireplace,
Of their lodge soon to be finished,
A fine lodge soon to be told of,
Builded in the distant forest,
Far from noises of the city,
Far from white men's habitations,
Gathered, one night as the sun set,
Maiden chiefs of many nations,
Come long miles to be together
Ten long weeks by Lake Sebago
Lake Sebago, Lake of all lakes;
In the quiet of the twilight
Talked the chief of maidens to them
To the maidens gathered 'bout her
Spoke of what the camp would mean there,
Of its name and of Wohelo,
What that island of ours stands for
Of the purpose and the meaning,
Three fold meaning of Wohelo,
Of the health we all did come for,
Of the work and love 'twill lead to,
Work well done and love for others
Coming all for health gained staying
At our camp, at our Wohelo.
Then the fire blazed up brighter
And the maidens danced about it,
Filled with joy at this their first fire
Kindled by the chief of maidens,
With her alway ready helpers
And the aid of the great spirit.
Then they softly gathered 'bout it,
Sang their evening songs and parted,
Melted in the outer darkness
Only loons to break the silence
Calling in the far off marshes.

With this kind of a life in the summer time the girls cultivate a love for the real rather than the superficial. They learn about the ancient people who inhabited our land, and they get an inner meaning of mythology, symbolism, woodcraft and handicraft. And, of greater importance, they acquire habits of health and the enjoyment of beauty which they will retain for the rest of life. Friendships, not knowledge, constitute the greatest single asset of a college education. We are beginning to realize that a college education is not desirable for all our young people. The aim of education is to prepare one for life. Often, however, young men and women reach the senior year of college with only the faintest idea of what they are going to do next. One would think that a child could go leisurely* through high school (our high schools are equal to colleges of twenty-five years ago), enter some one of the many technical schools or art schools in the country, and be graduated amply prepared to be self-supporting. Granting the value of friendships, they are made in these schools as well as in college. But the well-planned summer camp seems to us a still more effective medium for making friends. This is because the camp affords so many opportunities for doing things together. Many of the campers meet during the winter. They have their annual camp luncheons, and the return to camp the next summer is greeting members of one's own family.

There is a councilor for every four girls. These councilors have charge of the various crafts. The

* Children who are pushed too fast in their studies are conceited all the forenoon of life, and stupid all the afternoon. Etymologically a school is a place of leisure, not of haste.—*Huxley*

most careful supervision possible is given to the water sports. Girls who cannot swim are never allowed in canoes unless in charge of a person who swims and thoroughly understands the handling of boats. We plan to be over cautious in distance swimming and the use of boats.

Outfit.—Two heavy woolen blankets, one rubber blanket, one pillow, four bath towels and four hand towels, two pairs of dark blue bloomers with a blue serge skirt to match, four white Middie blouses and a white skirt, one dark blue Middie blouse, a heavy sweater, a bathing suit, a light dress.

Beyond these the girl needs only her traveling suit.

All articles must be marked.

Tennis racquets, a camera, a sketch book and any favorite music or musical instruments have a happy use at Wohelo.

Blankets and pillow should be sent by American Express Company to Camp Wohelo, South Casco, Maine, via South Windham, three days before camp opens. Only steamer trunks or large dress suit cases are suitable in camp.

The camp opens June 30th and closes September 1st.

Camp Cuisine: A Few Suggestions

By

CAPT. A. J. KENEALY

MEATS AND SOUPS

GOOD, fresh beef presents the following characteristics: The lean, when freshly cut, is of a bright red color, easily compressed and elastic, the grain fine and interspersed with fat of a yellowish-white color. The suet should be firm and perfectly white. In good mutton the fat is white also.

Young pork has a thin skin, easily indented, and the lean will break by pinching. If fresh, the meat is smooth and dry, but if damp and clammy it is not good. If the fat contains small kernels the meat is diseased and should not be eaten.

All frozen meats, game and fish should be put into cold water to thaw before they are cooked. Meat should not be placed in contact with ice, nor wrapped in anything that may impart a flavor. It becomes

* By permission of the Royal Baking Powder Co.

more tender and digestible by keeping it awhile.

BAKING

To bake properly either bread or meat a good oven is necessary. A joint of meat should be well rubbed with flour before putting it in the oven. It should be placed on top of a rack in the baking pan so that it shall be clear of the fat and juices that exude from it. Good cooks never put water in the pan. If the meat is lean, some fat is necessary. The oven should be piping hot when the joint is placed in it, so that the outside may be seared immediately, and the juices kept in. As soon as this process is finished, reduce the heat and keep it moderate until the joint is cooked. Pork takes the longest of any meat to roast. Half an hour to the pound is about the right time. Half-done pork or veal is not fit for human food. Beef should not have its rich juices too much dried up by long cooking. The cook must use his own judgment in this matter, as no hard and fast rule can be laid down. Much depends on the size of the joint and the heat of the oven. To insure tender and well-flavored meat, baste frequently. When the joint is cooked, put it on a dish, pour nearly all the fat out of the baking pan, pour a little boiling water in the pan, stir well with a spoon, cook for a few minutes and pour the gravy over the joint. While the meat is cooking don't prod it with a fork, as this lets out the gravy. Do not salt a joint before baking it. Pepper it if you want to, but no salt!

Where the cook has no oven, fresh meat, game and poultry may be baked in an iron pot. Sear the surface of the meat thoroughly in a very hot fry-pan, so as to

retain the juices. Put the meat in the pot with some fat and a little boiling water. Moderate heat, continuous care to prevent burning, and frequent basting are the secrets of a successful pot roast.

BOILING

Cooking by boiling seems a simple operation. It is easy when you know how, but many a splendid joint of meat has been ruined by the cook's want of knowledge. The secret of cooking meat by boiling is to simmer it slowly, and to skim off the scum that rises to the top as quickly as it makes its appearance. Always put meat, whether salt or fresh, in cold water, and let it come to the boil slowly. Then so contrive to reduce the heat that the water in the pot gently simmers. Never allow it to boil furiously, as that will make the joint tough. Fifteen minutes to the pound is a fair allowance for say a leg of fresh mutton, while salt beef or ham requires twenty minutes to the pound, or even more, according to its age and condition. The water in which fresh meat is boiled should always be saved for soup.

SOUP MAKING

In making soup, with meat, game, fish or vegetables as a basis, the object in each case is to extract all the nutriment with palatable results. Put the meat, bones and whatever vegetables you may have, chopped fine, into a pot of cold water. Bring slowly to a boil and let it simmer for several hours, skimming off the scum as it rises. The soup may be thickened with boiled rice, pearl barley, plain or brown flour. It may be flavored with onions or tomatoes, fresh or preserved,

with dried or fresh sweet herbs and parsley, and seasoned with pepper and salt. Canned soups have on the labels directions for preparing, which should be followed. In making soup be sparing with salt and pepper and sauces. In this respect tastes differ much.

STEWING

Stewing is an admirable way of making palatable coarse and tough pieces of meat, but it requires the knack like all other culinary processes. Have a hot fry-pan ready, cut the meat up into small squares and put it (without any dripping or fat) into the pan. Let it brown well, adding a small quantity of granulated sugar and sliced onions to taste. Cook until the onions are tender and well colored. Then empty the fry-pan into a stew-pan and add boiling water to cover the meat, and let it simmer gently for two or three hours. Flavor with salt, pepper, sweet herbs, curry powder or what you will. The result will be a savory dish of tender meat, called by the French a ragout. It is easy to prepare it this way. Do not boil it furiously as is sometimes done, or it will become tough. This dish may be thickened with browned flour, and vegetables may be added—turnips, carrots, celery, etc., cut into small pieces and browned with the meat. The sugar improves the flavor vastly. The only condiments actually necessary are pepper and salt. Other flavorings are luxuries.

FRYING

There are two good ways of frying—one in deep fat, the other with no fat at all.

Frying in deep fat is usually best when cooking

doughnuts, codfish balls, and sometimes fish. First fill the pan with fat deep enough to cover the articles and heat it smoking hot. To find out when the fat is hot enough, put a piece of bread in the pan; if it browns while you count fifty it is hot enough. The article to be fried should be dry when put in the pan. If moist the fat will thus be chilled, and the grease is rapidly absorbed, and the food becomes unpalatable and indigestible. If the fat is of the right temperature, a fat-proof crust is at once formed on the doughnuts or fishballs, and the flavor is delicate, the fiber tender and the juices are all preserved. The finest of fishballs, croquettes or doughnuts will be ruined if allowed to become sodden in lukewarm grease. The old-fashioned way of cooking the doughnuts was to put a little fat in the pan, and when it got halfway warm, to put in the pieces of dough to stew about in the fat, gradually absorbing grease unil they became sodden and practically indigestible. Such methods have given frying an undeserved bad name. If the fat is deep enough to cover, and if it is smoking hot before the doughnuts are put in, the result will be wholesome and attractive food.

The other way of frying is to use no fat at all. This is preferable for meat, ham, bacon and sometimes fish, and is the next best thing to broiling. Put no fat at all in the pan, but heat it almost red hot; then put your meat in and the heat will seal up the juices and the meat will be nearly as tender and tasty as though broiled over the hot coals, which is, after all, the ideal way of cooking chops, steaks, cutlets and young chickens.

A fry-pan's usefulness is almost unlimited. Fish, flesh and fowl may be cooked in it, bread baked, flap-

jacks and pancakes fried, stews prepared and coffee roasted. Choose a very deep one for camp or sea use —one preferably with a tight-fitting lid, such as French cooks affect. This is for use when the pan is being utilized as a stew-pan. When fish or meat is being fried, no cover is necessary. A stick may be lashed to the handle to lengthen it if necessary.

BROILING

Given a clear fire of glowing coals, a very hot gridiron and a tender steak,whether of beef or venison, a veal cutlet or a mutton chop, a few minutes will prepare a dinner fit for the most fastidious. But unfortunately, tender meat does not come often enough to the men for whom this little book is principally written. If the beef or mutton is old and tough, instead of being young and tender, grilling it will not be so satisfactory as converting it into a savory stew. If, on the other hand, the flesh is young and in prime condition, cut the chops or steaks not less than an inch thick. Have your broiler almost red hot, grease the bars with pork rind, place the meat in it, let one side cook for one minute, then turn it over, repeating the process for from five to eight minutes, the time depending, of course, upon the heat of your fire and the thickness of the meat. A thin steak or chop is not fit to be grilled. Serve on hot plates. Fried onions and mustard go well with beefsteak. Tomatoes cut in half and broiled on the gridiron are capital companions to mutton chops. If fresh tomatoes cannot be obtained, cook the canned or evaporated variety for twenty minutes with a little butter or pork fat, pepper and salt.

Fresh fish of almost every kind is good broiled, especially the fat varieties, like salmon, mackerel, etc.

FISH

Fish makes an agreeable change in the regular camp fare. Where there is water there is generally fish, therefore include fishing tackle in your outfit. Nearly every kind is good fresh from the water, including the much despised sucker. If bought in a market their condition may be found by a few simple signs. They are fresh when the eyes are clear, the fins stiff, the gills red and hard to open. Unless fish have been frozen or have been taken from muddy water, they should not be soaked. If frozen, soak them in cold water to thaw. If they come from muddy streams, after they have been cut up soak them in strong salt water. A curry comb, as used for horses, is good for scaling fish.

There is no excuse for the yachtsman neglecting to enjoy the delights of fish fresh from the river or sea. Bluefish and mackerel may be caught by trolling, and once in a blue moon a Spanish mackerel may fall to your lot. A fish transferred in about two shakes of a lamb's tail from the fish-hook to the fry-pan, or better still, if your arrangements permit, to the grid-iron or broiler, is good enough for the gods to feed on. Two axioms should be borne in mind, namely, to fry in plenty of boiling fat, or to plunge into boiling water. Never humiliate a fish by placing him in a cold fry-pan or into a cooking pot of cold water.

THE CARE OF BUTTER

Rancid butter may be made edible by melting it in plenty of boiling water and stirring it well. If it

is then poured into cold water the objectionable flavor will be gone. A good way to keep butter in camp is to pack it tight in a watertight tin pail, such as a lard pail, covered closely and sunk in a net in the river. If there is no river, keep it in a spring. If there is no spring, bury it in the ground. Butter, if kept in a hot atmosphere, soon spoils. Strong brine will preserve butter for a long time. Weight the butter down so as to keep it covered with the brine.

COFFEE

The simplest way to make good coffee is to allow one tablespoonful of the ground berry to each pint of water. Put fresh cold water into a clean coffee pot and let it come to a boil. Add the coffee grains and let it boil up for two minutes. Add one cup of cold water to settle the grounds, and serve.

COCOA

For each cup allow one teaspoonful of cocoa mixed up with a teaspoonful of condensed milk; put into a pot of hot water and let it come to a boil. Serve and let each man sweeten to his taste.

TEA

Put in a teapot a teaspoon of tea for each cup. Pour on boiling water. Let stand for five minutes and serve.

A PRACTICAL CAMP FIRE

Logging and mining camps are, of course, supplied with some sort of cooking stove, which answers for the ordinary preparation of food-baking and boiling, stewing and grilling. It may, however, be useful to give amateur campers a hint or two concerning the building

of camp fires, which may benefit them and save them much discomfort. There is an art in making a fire that is a fire. Experienced woodsmen will, out of the most unpromising material, such as damp wood, have a roaring fire kindled in a time surprisingly short, with flapjacks and salt pork sizzling in the fry-pans and the fragrant steam of coffee ascending from the pot. Skill and patience are the only things requisite. Get two green logs about five feet long and about a foot in diameter, lay them on a level piece of ground about a foot apart at one end and touching at the other—V shape. Between these logs build the fire. Gather dry twigs and sticks to start with, adding gradually larger pieces of split wood until you have a fire under way that fills up the space between the logs. Pieces of hard wood make the best coals. When smoke and blaze have quieted down, set your coffee pot on the spot where the logs join, and your fry-pan and cooking pot where they are farther apart. Thus you may cook a meal in comfort.

If you make your camp where logs cannot be procured, dig a trench eighteen inches wide, twelve inches deep and from four to six feet long. In this trench make your fire as above. A stout stick with a fork in it, driven in the ground at each end of the trench, will support a limb from which kettles may be hung.

TO DRESS A DEER

Should fortune smile on you and a deer or moose come in your way and you want to prepare the animal for the camp-fire, follow these directions: If possible, skin the deer while yet warm and it will save you a peck of trouble; a frozen animal is a tough proposition to

tackle. Hang the deer by one hind leg, cut the skin from the top joint to the second joint of the leg, make an incision around the hock and then begin the process of skinning downward. It will peel quite easily if handled gently. When the legs are bare, cut the skin down the center of the belly to the breast, being careful not to cut into the flesh. Then, with gentle force, draw the skin off the whole carcass, using the knife when necessary. A sharp knife is indispensable. The head may be skinned or it may be cut off without skinning. After the deer is skinned, hang him up by both hind legs, insert your sharp knife in the breast and rip up the belly. Open the deer and keep open with a strong and slender stick. Put your hand above the kidneys and with gentle tension release the entrails, which will come out easily, leaving in the liver, heart and lights. The animal is now ready for use. Let it hang for twenty-four hours before you cut it up, unless hunger forbids. When you want to cut it for cooking, split through the center, beginning at the tail and ending at the neck; divide into fore quarters and hind quarters, the hind quarters being the best. The flesh may be roasted or stewed. If baked in the oven, skewer on it plentifully thin slices of salt pork or bacon. Venison is dry if this precaution is neglected. Grill chops over hot coals or on a red-hot griddle. Do not fry in fat. The liver and heart are good baked in a pan in the oven with onion and small cubes of salt pork.

TO COOK A DEER'S HEAD UNDER DIFFICULTIES

Dig in the ground a hole of sufficient size and build a fire in it. After the fuel has burned to coals, put in

the head, neck downward, cover it with green grass, coals and earth. Build a good fire over the buried head, and keep it burning for about six hours. Unearth the head and remove the skin. A head treated in this way at night will be found cooked in the morning. The head of any animal may be cooked in this way.

BAKED FISH WITHOUT AN OVEN

Dig a hole in the ground about eighteen inches deep and of sufficient size to contain the fish; build a fire in it and let it burn to coals. Remove the coals, leaving the hot ashes at the bottom, upon which place a thick layer of green grass, place the fish on top and cover with another layer of grass, then rake back the live coals and loose earth, and build a small fire on top. At the end of about three-quarters of an hour the fish will be found cooked, with the juice retained. The skin will peel off and leave the flesh clean and free from ashes and dirt.

Gleanings from My Experience

By

POWHATAN R. ROBINSON

THE CALL OF THE WEST

WHILE the great outdoors is almost anywhere of benefit to mankind, the delightful climate of the Rocky Mountains, the fascination of the Western life, appeals most strongly to me. This is the home of the lordly elk, the sprightly mule-deer, the black and silver-tip bear, and the sage and willow grouse. I am more familiar with the hunting country reached from Billings, Montana, and Cody, Wyoming, upon which my experience is based; but as I am anticipating a trip to British Columbia I may be able to give sportsmen the advantage of a wider field a year hence. I can now refer you to those who will give reliable information in regard to the Canadian Rockies and as far north as Alaska. Wyoming is the premier State for wapiti, and there is a fair chance for mountain sheep, the *pièce de résistance* of most big-game hunters.

It is usually necessary to make arrangements with your guide some months in advance, to insure a good

one; and guides usually ask a deposit of $100.00 as a guarantee of good faith. The charge for a hunting guide is $5.00; cook, $3.00, and horse-wrangler $3.00 per day; and it is much more economical to have each in your party, as one cook and wrangler is enough for a party of any size. When there is only one sportsman, one man acts as both cook and wrangler. Pack and saddle horses cost 75 cents per day, and each sportsman will require four or five packhorses to carry personal duffle, bedding and provisions for self and guides. The guides furnish their own saddle-horses, but the sportsman pays for the horse that carries their bedding, and they never travel light when the other fellow pays. That is human nature and not peculiar to the West.

To sum up, I should say, the cost to one sportsman would be about $18.00 per day; if there are two or three in your party this will be reduced to $15.00 or $12.50 per day, per man, and of course still less if four sportsmen go together. I am figuring on a three weeks' trip and a $50.00 license. You must furnish your own gun, of course—and your sleeping bag; and if you don't relish sleeping close to Mother Earth, take a thin khaki cotton-filled mattress, for practically no boughs can be had.

A Stetson hat with wide brim is the correct headgear. Use high-topped boots, not too heavy, studded with screw-calks, and have some extra calks along to screw in, as you will lose some tramping over shale rock. Wear a pair of low moccasins around camp, as they will ease your feet wonderfully. You don't need "chaps" such as most cowboys and guides wear, but quite a few sportsmen use them, more perhaps to try to look like the "real thing." But you will be

spotted for a "dude" anyhow. I would, however, take a quirt (whip) for it's a hard thing to borrow, and put your name on it.

Your underclothing should be "all wool," as the nights are cold and a Mackinaw coat is a comfort. A bright-colored silk neckerchief supplies the finishing touch to your costume and is useful in preventing the wind and sand from chafing your neck. Take a Colt revolver if you can shoot it well enough to hit grouse on the ground; otherwise make your side-arm a Marble "Game Getter." As for your big rifle, that's largely a matter of personal choice; but have it a hard hitter and capable of long-range shooting. I have something to say about rifles in another part of this book. I have a list of the personal outfit I took which I will gladly send to anyone who is interested.

The head guides are, for the most part, ranchmen and are reliable. They will attend to everything for you, supplying tents and cooking utensils, and engaging the assistants. They will buy the provisions in advance if you so direct. If you go in at Cody, you will arrive at about noon. Your head guide will meet you, and this will allow time for the selection of provisions. Stop at the Hotel Irma, which is owned by Buffalo Bill; and if you write or wire ahead you have a chance of getting one of the two rooms that have bath connected.

It is probable you will go from Cody over fair country roads to a ranch in a spring wagon, and perhaps get a chance shot at a coyote on your way there; so have your rifle handy. At the ranch you will spend a night and early the next morning the pack team will be made up and the real start for the hunting country will begin.

Don't worry on the narrow trails or conjure up visions of a quick descent to a canyon five hundred feet below, for your horse will be sure-footed and careful on his own account.

I shall never forget my first trip west, when I was given a little horse to ride called "Dolly" who had quite a reputation as a bucker. I swung into the saddle from the left side (don't ever try the right side of a bronco) and the frontiersman, who was to be my companion, drawled, "You have ridden a horse before." "Yes," I replied, "but never a cayuse like this. What do I do if she bucks?" "Look for a soft spot," he answered laconically, as he bit off a big hunk of "Cowpuncher's delight" chewing-tobacco.

The hunting season at present (1913) opens September 1st, but there is talk of changing this to September 15th and cutting down the limit on elk to one bull in place of two. You are allowed two deer, one male mountain sheep a season, and eighteen game birds per day—not more than twelve to be grouse. That seems like a plenty to me. There is no objection to your getting all the bear you see, but to hang the pelt of a grizzly of your own killing in your den you must shoot quick and true.

I am personally acquainted with or know the good points of many guides around Cody and I'll do all I can to help inquirers in their selection.* The Teton Range is good hunting country, too, and I know a guide there in whom I have the greatest confidence. The only reason I prefer to give the names and addresses in a letter is because I might do some good man, with whom I am not acquainted, an injustice,

* Address, 17 Warren Street, New York.—Ed.

if I published an incomplete list. If you would like to read more about the Western country get "American Big Game Hunting," edited by Colonel Roosevelt, "Some Big Game Hunts," by A. H. Cordier, M. D., and "Camps in the Rockies," by Baillie-Grohman.

CONTENTS OF A DITTY-BAG

I never go light unless the occasion requires it; and whether you do so or not, take along a ditty-bag to hold the little odds and ends. I will mention here some articles that experience teaches *might* come in handy, and would suggest that you disregard those that don't seem to you worth while.

By all means, adhesive plaster in a small tin, but better still a Tabloid "First Aid" kit. One can't provide for all the accidents that *might* happen in the woods; but be prepared for small accidents, such as cuts, bruises, and burns. And if you are going a long way from a doctor, read "Backwoods Surgery and Medicine," by Dr. Charles S. Moody. I have saved myself some annoyance on several trips by carrying a small tube of "New-Skin," and I always have "Dioxogen" in my kit. I used up a 25c bottle of Pond's Extract on a long horseback trip through Yellowstone Park, for sitting in a saddle all day used to chafe me when the weather was hot. Cold cream or salve of some sort is a necessity to those traveling in the alkali-laden air of some Western States, to prevent the lips cracking. Once when hunting in New Brunswick I blistered my heel with a new pair of high moccasins and I was in misery until my guide "dug up" a corn-plaster—a large one with a hole in the center. Now I always carry one-half dozen of assorted sizes and it so happens that

I haven't had a chafed heel since I began doing this.

An Indian I hunted with in the far North always carried half a dozen assorted nails in his vest-pocket and had a couple besides in use in place of suspender buttons. Two good-sized needles, a little thread, and a button or two should be in every kit. Attached to a loop on my trousers I always carry a long leather thong and so am always provided with extra shoe-strings, besides finding many other uses for it. Of course you need a compass and a water-proof match-box; and if there is a chance of your being caught out over night, a Marble Belt Axe. These, with a "hunk" of seedless raisins and one-quarter pound of chocolate, will be a comfort if you can't find your way back to camp.

Some one asked me once, "How do you use a compass?" and it is a reasonable question, but I found it hard to put the answer in words. First, don't forget that the black point of the needle points north; and it might be well to follow Horace Kephart's suggestion and scratch on the case "B—N" meaning Black equals North; for when you are lost for the first time you can forget even your grandmother. You must know something about the direction in which you want to go or the location of some objective point; or if you wander out aimlessly from camp make a mental note of the course you are traveling, and your head, watch and compass working together should bring you back safely. Assume that you paddle up a lake three miles and decide to leave your canoe and hunt back to camp some miles from the lake. You know that up the lake is west and so if you hunt in a northeasterly direction and then swing to the southeast and travel about the

same time you ought to strike the lake somewhere near your camp. As you approach you will probably recognize some objects, such as a mountain or a cove in the lake that will set you accurately on your course before you reach the shore.

An empty pillow-cover made of denim or ticking does not weigh much and can be filled with browse or jammed with your extra clothes. It's more comfortable than supporting your head on a saddle or a log of wood, such as our original frontiersmen were *said* to use. A folding drinking-cup made of aluminum is all right, except when hunting—it is apt to rattle. Then a rubber one is better. Paper towels are light and sanitary and more absorbent that you might imagine, but I usually take half worn-out linen towels from home and throw them away when they turn black. Big horse-blanket safety pins are convenient for many purposes, and cleaning rags, made of cotton flannel, cut round to fit your rifle snugly, save bother in camp.

BAIT-CASTING

Bait-casting is the ideal way to catch bass, pickerel or other fish that lurk in the weeds or under overhanging trees near shore; and after a little practice one soon becomes sufficiently expert to catch fish by this method.

A 5½ foot split bamboo rod, made in two joints, with large agate top and agate butt-guide with high German-silver guides between, suits the average caster. The tournament caster usually has all his guides agate and his rod is made in one piece with a detachable butt. A three-piece rod is not desirable and has nothing to recommend it but convenience in carrying. The reel

should be good quality, free-running, quadruple-multiplying, and with a wide spool. A Meek or Talbot is best, but you need not go to so much expense to get results. I have found the No. A "Premier" very satisfactory and would not hesitate to use a cheaper grade, but of course their life is shorter than that of the more expensive kind.

The line should be braided silk, not enameled, 50 yards long, and of small diameter. Live minnows and frogs can be used, but many anglers use artificial bait, of which there are many different styles. I cannot recommend any one artificial bait that will prove satisfactory in all waters or at all seasons. It is well to have an assortment of spoons, artificial minnows, and both surface and underwater baits if you have no way of getting definite information as to what is locally successful.

To cast, take your position facing the point where you want to place the bait, draw out twelve to fifteen inches of line, grasp the rod firmly, with the reel on top but slightly inclined to the left, with the ball of the thumb pressed firmly on the spooled line. The rod should be held with tip pointed a little off the horizontal towards the water. Raise the rod slowly—just fast enough to keep the bait extended—carrying it over the shoulder until it reaches a horizontal position or nearly so. Bring the rod forward slowly at the beginning and gradually but quickly accelerate the speed until it reaches about forty-five degrees, winding up in a jerk, and the bait darts out in the desired direction.

The most difficult part of the cast is the control of the spool of the reel with the thumb. As you lift the rod over the shoulder backwards the thumb is pressed

tight so the line can't run off, but as the forward stroke is finished the pressure is, for the time being, almost entirely withdrawn. After the bait has started on its way, just enough pressure is applied to prevent the reel from overrunning and backlashing the line, but not enough to retard the bait in its flight. In other words, the spool must revolve just fast enough to accommodate the flight of the bait through the air, and no faster.

Next on the programme is the winding-in of the line, and this must be done evenly and firmly. To accomplish this, grasp the rod with the left hand a little above the reel and "feed" the line between the thumb and forefinger, as you turn the handle of the reel with the right hand. The above describes the overhead cast, which is the one generally used; but under some conditions the side-cast is desirable. To make the side-cast, hold the reel on top and swing the rod to the right instead of straight back. Otherwise the two casts are very much alike.

Game Protection That Protects

AN ACCOUNT OF THE GAME ACT OF NEW BRUNSWICK AND OF ITS REMARKABLE EFFICIENCY IN INCREASING THE NUMBER OF MOOSE IN THAT PROVINCE

By

GEORGE GLADDEN

DURING about a fortnight of camping and hunting in New Brunswick, in 1911, I became much interested in the admirable Game Act of that Province, and I am confident that all persons who lament the rapid disappearance of big game in the United States will be glad to know, with some particularity, about this remarkable measure, and its beneficent effects upon both the men and the beasts whom it directly concerns. It is my personal belief that the spirit, and to a large extent the letter, of this law is entitled to the serious consideration of persons who are interested in the conservation of game in this country.

With my guide, James Storey (an experienced and

* Copyright, 1913, by George Gladden.

clever moose-hunter, and an intelligent and observant woodsman) I was in camp for seventeen days within hearing of the Dungarvon River (Northumberland County) in the very heart of a dense and practically primeval wilderness. A lumber camp, abandoned several years before, was our base of operations, and we lived very comfortably in the cook-shack (shown in an accompanying illustration), which had been kept in good repair by Storey, who hunts—as a guide, and for himself—in this region. The nearest settlement, Doaktown (Storey's home), was thirteen miles distant, to the southeast. Excepting the young guide who brought our "duffle" (by wagon) into this wilderness, and took out what was left, we saw no human being during those seventeen days. Twice, I think, we heard the report of a rifle, far away; and two or three times we heard the strokes of an axe from a lumber camp fully *three miles* distant. And lest this may seem a big story, I hasten to add that one morning, while we were paddling across Dungarvon Lake—a very beautiful little sheet of water near our camp—we heard distinctly the exhaust of the locomotive taking the train out of the station at Doaktown, *thirteen miles* away. Such is the extraordinary clearness of the air and the wonderful quiet of the forest in that country.

The effects of the intelligently conservative lumbering which had been done from our camp (and which is the only kind permitted in New Brunswick) had already virtually disappeared, except for the dimly marked aisles made by the roughly "swamped out" lumber roads, and even these Nature was rapidly obliterating. We "cruised" this country pretty thor-

oughly within a radius of four or five miles of our camp, and were constantly coming across fresh tracks of moose and deer, and we also found several fresh tracks of caribou, though it was early (about the middle of October) for those animals to be in that region. Twice Storey's trained eye detected, in the rough trails we followed, the cautious footprints of a bear. We had the rare treat of seeing four big otter, swimming swiftly, in single file, across the Dungarvon River, and we found repeatedly the tracks of mink, fisher and fox. Only the year before, beaver had dammed a brook about three miles northwest of our camp, and had moved (Storey thought not far away) only when their structure had been cut through—probably by a game warden and because it had backed up a pond which was killing valuable timber.

Undoubtedly the moose were literally all around us. Although it was toward the very end of the calling season, Storey—who is a finished artist with the birch-bark horn—gave the cow call several evenings from our camp, and in nearly every instance got an answer from a bull moose. I confess that at first I was somewhat skeptical about these answers, for though my hearing is, I think, rather better than the average, I did not detect them; nor could I hear the "rumblin' "—as Storey described it—of the animal's hoofs, nor the scraping of antlers on the tree trunks and branches, which he reported to me in whispers. But afterward I had ample and convincing evidence that Storey actually heard these sounds. One morning, for example, he went straight to the spot about one hundred and fifty yards from the camp, where the evening before he had said he heard a moose, and there, surely

enough, was the fresh track of a big bull. Storey was vindicated!

We actually saw four large bull moose, six cows, and two little bull calves. The bulls were very watchful and shy, as these remarkable animals seem always to be, even where they have been little hunted; but the cows were absurdly tame. Late one afternoon while Storey and I were watching for deer on a hillside overlooking the Dungarvon, two cows splashed through the stream (we heard them coming when they were fully two hundred yards away), scrambled up the hill making a great racket, and passed on into the forest within thirty yards of us, but without increasing their deliberate pace, although they must have seen us, for we were sitting in plain sight in an open trail. The accompanying illustration of a cow moose, feeding in Dungarvon Lake, is a reproduction of one of six exposures which I took of the same animal, with a small pocket kodak. It isn't much of a picture, as animal pictures go nowadays, and I present it chiefly for its interest as ocular proof of the tameness of the animal. She was only about seventy-five yards distant, and must have seen me, as I stood clear of the brush after I had made the first exposure. She raised her head and looked directly toward me several times while I was training my camera on her, or changing the lens stops and the speed of the shutter. For I had to point my camera almost directly toward the sun, which was about half way down to the horizon, but fortunately was more or less obscured by clouds. These conditions account for the blackness of the foreground and the general lack of light and shade effects in the picture. Meanwhile the cow showed not the slightest sign of alarm,

and continued to feed quietly on the submerged roots and grass until Storey and I had made our way for forty yards or more along the trail and in plain sight, to the water's edge, where his canoe lay. Then she looked up, surveyed us calmly for fully half a minute and simply *sauntered* out of the water and into the woods, with what I fancied was a bored air. Immediately thereafter we discovered a little bull in the reeds between us and where the cow had disappeared. His scrubby little mane stood up as he inspected us defiantly, and then he, too, retreated with much obvious deliberation and dignity into the woods. Almost instantly we heard a bull challenge angrily from the forest where the cow had disappeared. It is more than likely that he, too, had seen us and was thus expressing his disapproval of our scrutiny of his wife, *pro tem.* (for Sir Moose is a shameless bigamist) and her son.

Early one morning we watched, for half an hour, another cow feeding in almost the same place where the one in the photograph is shown. Storey thought there might be a bull just out of sight around the point where the big pines stand, as the cow repeatedly raised her head and looked in that direction; so as soon as she went ashore we started to crawl on our hands and knees, along the muddy game trail skirting the lake. When we were within twenty yards or so of the point, we heard the water splashing, and presently the cow rounded the point and came straight toward us along the trail. Although the grass was nearly waist-high, she saw us almost instantly, and stopped short and surveyed us with an air which plainly bespoke surprise and curiosity, rather than

alarm. We crouched, perfectly motionless, and presently she came forward again, a step or two at a time, until (as we afterward measured it) she was actually within *eight yards* of us, and I could plainly see even the color of her eyes. Here she paused and gazed steadily at us for, I should think, fully fifteen seconds, while I cursed my luck that I did not have in my hands my camera, which Storey was carrying in its case, slung over his shoulder. After eyeing us almost calmly, the big beast turned and, without the least show of haste, stalked into the woods. At this time we neither saw nor heard anything of a bull, but it is likely that one was lurking nearby.

The abundance, and still more the *tameness* of cow moose in New Brunswick bear witness to the efficiency of the protection in that Province of this, the greatest and the most impressive of all the *Cervidæ*, living or extinct; and explain its increasing numbers there. For I learn from what I believe to be entirely trustworthy sources, that since the passage, in 1893, of substantially the present Game Act, which forbids altogether the killing of cows and calves, and prohibits the killing of more than one bull per year by any individual, the number of these noble animals undoubtedly has steadily increased. Briefly, the absolute protection of cows insures the presence of bulls with the certain result that breeding will be rapid, especially when the kill of bulls is limited, as above mentioned, with the further restriction—also imposed by this particular law—that no bull shall be killed who is not at least three years old, and who, therefore, has already begun to breed. Experienced woodsmen say that, allowing one calf a year, after the cows are two years

old, fifty cow moose, if protected for eight years, would become responsible for an increase in the moose population by at least 1,500 animals.

Storey was much perturbed over the report he had heard that the provincial Parliament was to be asked to permit the killing of cows for one season. "It would be a big mistake," he declared. "Why, every boy big enough to shoot a gun would go out in the woods killin' cow moose, which any boy could do; for, as you can see, they're so tame you could almost knock 'em down with a club. And what would happen? Why, there'd be so many folks in the woods, and so much bangin' away, and so many cows would be killed, that the bulls would scatter, and most likely a lot of 'em would pack up and leave the country altogether, on account of there not being enough cows to go 'round." And he urged me to write "a piece to the papers and say it would be a big mistake to take the law off cows even for one season." Concerning the significance of Storey's solicitude about the cow moose, I shall have more to say further on, but in this connection I should like to present a résumé of this New Brunswick Game Act, the essential features of which, I believe, may well be considered seriously by all sportsmen, and especially by persons who have to do, or can have to do, with the form and substance of legislation intended to protect game in the United States.

To carp a little at the outset—and then no more—it seems a bit strange that, throughout this Act, the term "horns" is used, instead of "antlers," in speaking of the chief weapons of offense and defence of the moose, caribou and deer. Correctly speaking, "horns" are peculiar to the *Bovidæ*, are hollow, are found in both

sexes and are permanent (except in the American pronghorn, or "antelope"), while "antlers" are characteristic of the *Cervidæ*, are solid, are normally confined to the male (except in the reindeer family, of which the caribou is a member), and are shed annually. It is, therefore, quite incorrect to speak of the "horns" of a moose, a caribou or a deer, for each of those animals has true *antlers*, as just described. However, I wouldn't advise any hunter in New Brunswick to kill a moose or a caribou with smaller "horns" than the law prescribes, and plead this technicality before a Canadian justice, for I suspect that he wouldn't "get away with it."

The systematic protection of game animals in New Brunswick began in 1893, when substantially the present Game Act was passed by the provincial Parliament. The big game animals which now have absolute protection all the year round are the cows and calves of moose and caribou. The law says that the male animal is a "calf" until he is at least three years old and has at least three points, or tines, not less than four inches long on each "horn" (*sic*). Anyone who "hunts, takes, hurts, injures, traps, snares, shoots, wounds, kills or destroys [which surely is sufficiently inclusive and explicit] any cow moose or cow caribou, or any calf moose or calf caribou" is subject to a fine of not more than $200 nor less than $100, or to imprisonment for not more than three months nor less than one month. This obviously makes the killing or molesting of these animals rather more expensive and inconvenient in its consequences than the average hunter is likely to care to indulge.

Here is the very backbone of the New Brunswick Game Act, so far as these animals are concerned—

the protection at all times of females, and of males until they have become old enough to breed. To this clause the frequency in this Province of these fine animals is undoubtedly due. And the penalty for killing adult bull moose or bull caribou in the close season (November 30th to September 15th) is only a little less severe—a fine of not more than $150 nor less than $50, or imprisonment for not more than three months nor less than one month. Hunting deer in the close season is a less serious offense, the penalty for which is a fine of not more than $50 nor less than $20, or imprisonment for not more than twenty days nor less than five days; but the ratio is about right, considering the greater commercial value of the moose or caribou as trophies, and the relative number of the animals as compared with deer, which are much more plentiful. In this connection it is worthy of remark that all penalties for hunting game on Sunday are *double* those for hunting the same game on week days during the close season. Apparently, our Canadian neighbors believe that the Fourth Commandment was intended for the benefit of beast as well as man. Double penalty is also prescribed for hunting moose, caribou or deer "by means of, through the use of, or with the assistance of any artificial light or lights (i. e., "jacking"), or "through the means of, with the assistance of or when such person is accompanied by any dog," and game wardens are authorized "to kill on sight any dog found chasing or known to have chased moose, caribou or deer."

Again, trapping or snaring, or attempting to trap or snare any game excepting fur-bearing animals, is punishable by a fine of not more than $150 nor less

than $25, or imprisonment for not more than three months nor less than one month. The same penalties are prescribed for hunting moose or caribou in excess of the limit prescribed by the law, or hunting them in the night time (i. e., between one hour after sunset and one hour before sunrise). And having in one's possession, or keeping in cold storage, during the close season the carcass or any portion thereof of any moose, caribou or deer, or of any game animal or game bird, is forbidden under penalty of a fine of not more than $100 nor less than $50, or imprisonment for not more than two months nor less than one month, while the hotel proprietor or the owner of a restaurant who "advertises on his menu or bill of fare, or serves or sells any cooked game or dish composed in whole or in part thereof, after fifteen days from the expiration of the open season for such game" is subject to a fine of not more than $25 nor less than $10, or imprisonment for not more than one month nor less than ten days.

So much for the clauses in this law which provide for what may be called the *direct* protection of the game animals mentioned. The clauses having to do with their *indirect* protection are hardly less rigorous, and, in their operation, are probably no less efficient. Of these the requirement that all hunters shall take out licenses is perhaps the most significant, especially in-so-far as licenses for *non-resident* hunters are concerned. In 1897 the non-resident license fee was fixed at $20. This was increased in 1900 to $30, and in 1905 to $50. Since 1905 this $50 license has given the holder the right to shoot (in the calendar year for which it is issued) one adult bull moose, one adult bull caribou, and two deer of either sex. The resident license fee

for the same kill is only $2. Since 1907 the non-resident has been required to take out a license to hunt deer and game birds, the fee being $10.

It is evident from the difference between the license fees for the resident and the non-resident that the framers of this law discerned several things very clearly. They saw that the big game of the Province was more in danger from the non-resident than from the resident, a fact which ought to be obvious enough to any sensible person, and which is recognized in the game laws of many of our States. The political justification of the restriction is also sufficiently clear, for it asserts, by implication, the broad principle of home rule, and the right of the citizen to claim privileges under the government which he helps to support, morally and otherwise, which are not extended to an alien. Bluntly, the people of New Brunswick contend through this law that the non-resident who hunts their game which is a part of the natural assets of the Province (and a valuable as well as an interesting part, as will be shown presently) ought to be made to pay well for it, and no sensible person will reproach them for this attitude. Undoubtedly this license fee keeps hundreds of hunters out of the Province every season, but it does not bar them altogether; as a matter of fact their number has steadily increased, as will be shown further on in this article, where the purely economic aspects of this law will be considered.

The license for the non-resident is made out on a stout card which includes a form for the licensee's name and address, the place and date of issue, etc., and also (in the case of the full license) printed coupons for each animal he is entitled to kill. The body of each

Copyright, 1913, by George Gladden

COW MOOSE FEEDING IN DUNGARVON LAKE

(Photographed from about seventy-five yards. The camera was pointed almost directly at the sun, and this accounts for the blackness of the foreground)

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IN THE NEW BRUNSWICK MOOSE COUNTRY

coupon must be used as a shipping tag in transporting the head or any part of the carcass, and must bear the licensee's name as well as the shipping address. Furthermore, the receptacle containing any part of the carcass must be made in such a manner that the contents can be easily examined, and a description of them written on the tag. Attached to this tag is a coupon, which must also be similarly filled out, and this coupon must be detached by the agent of the railroad or carrying company transporting the head or part of the carcass, and forwarded to the surveyor-general of the Province. No carcass or part of a carcass may be transported by any carrying company unless the tag is attached, and any agent failing to send the return coupon to the surveyor-general is subject to a fine of not less than $25 nor more than $100 for each offense.

It is declared to be an offense against the law "for any person at any time during the year to hunt or kill any moose or caribou in such place or places or under such circumstances as to render it impracticable to bring out the head of such moose or caribou with a view to the affixing of the tag. . . unless the killing of such moose or caribou be absolutely necessary in order to provide such person, or those who may be in his company, with food, the burden of proof as to such necessity in all cases to rest upon the person so killing such moose or caribou as aforesaid." The penalty for violating this clause is the same as that provided for hunting the animals without a license—that is, a fine of not more than $150 nor less than $50, or imprisonment for not more than three months nor less than one month. The purpose of this provision is apparent,

and its wisdom is obvious. It will have a deterrent effect upon the hunter who is ready to kill for the sake of killing, and who, therefore, would slaughter a moose or caribou which was swimming a lake, or floundering in deep snow or in a bog, though it was evident that he could not bring out even the head.

Another far-sighted clause provides that no license to hunt moose or caribou "shall authorize any licensee while he is a member of a lumber crew or employed as a lumber man, or in connection with lumbering, and boards or lodges at any lumber camp, to shoot any moose or caribou at any time after two moose or two caribou have been shot or taken during the same open season by any other licensees employed in connection with lumbering, boarding or lodging at the time they killed such moose or caribou in such lumber camp, or forming part of the same lumber crew. And any person shooting any moose or caribou under such circumstances . . . . shall be deemed to have shot such moose or caribou without a license therefor." This is a wise restriction, intended to prevent the decimation of the game it concerns in the often very extensive region covered by lumbering operations from a single large camp. In such a camp there might be thirty or forty men, and if even half of them held hunting licenses, and each man killed his moose and caribou, the result would be a serious thinning out of the animals in that vicinity. It is highly probable, moreover, that a slaughter of this kind would actually occur under these conditions, inasmuch as a good moose or caribou head can easily be sold to a taxidermist for at least $50, while if it is a very large head, it might fetch twice that price. A lumberman who is paid $1.50 or $2 a

day, or even more, is not likely to miss a chance to add $50 to his earnings.

Again, everyone is guilty of an offense against the law, and is liable to a fine of not more than $50 nor less than $10, or to imprisonment for not more than one month nor less than ten days who "brings or carries or has in possession, in or upon any forest, wood or other resort of moose or caribou, any gun or other firearm, between the 30th day of November in any year and the 15th day of September then next following (the close season) without first having obtained from the surveyor-general or chief game warden a permit to do so." And the game wardens are given the right "to search between the said dates, both inclusive, for any gun or other firearm in any camp, or other building, situate in any forest, wood or other resort of moose or caribou, or any vehicle or vessel used or capable of being used for conveyance or transportation by land or water, being in any such forest, wood or other resort."

Finally, but by no means the least important phase of the indirect protection afforded game animals by this law, there are the sections providing that every person who has to do with the hunting of such animals must provide himself with a prescribed kind of license. This applies not only to actual hunters, but to guides and even to camp help. As to guides, the law prescribes that "no person shall be entitled to a license to accompany in the woods as a guide any person hunting or intending to hunt moose, caribou or deer, unless he is a resident of the Province, and until he shall first have been registered as a guide in the office of the surveyor-general. Every application for registration

as a guide shall be made on a printed form prescribed by the surveyor-general and shall be filed in the Crown Land Department. The surveyor-general shall inquire into each such application, and if on examination of the applicant he deems him to be a proper person, and properly qualified, the surveyor-general shall order him to be registered as a guide and issue to him a certificate of such registration." But no person may hold, at the same time, more than one of the following licenses: a hunter's license, a guide's license, or a license as camp help or assistant. That is to say, a regularly licensed guide is forbidden actually to kill game, nor can a native who has taken out a hunting license act as a guide or as camp help. This restriction prompts many guides who desire to avoid all suspicion to leave their rifles at home when they go into the woods as guides. Storey, for example, while he was with me, carried as his only weapon—besides his hunting knife—a small camp axe.

However, he and other intelligent guides with whom I discussed this restriction seemed to think that it was not altogether wise. Their feeling was that it should be modified so as to permit a guide to kill a *wounded* animal, if possible, with a shot from his own rifle, if there appeared to be danger that the animal would get away. "Buck fever," poor shooting, or a really difficult shot—such as all hunters are impelled sometimes to take—may create a situation of this kind, with the consequent escape of the wounded animal, a happening which every humane hunter will go to almost any length to avert. Therefore, these woodsmen argue—and with some force, it must be admitted—they should be permitted to finish the ugly

job, if they can, rather than to let the wounded animal escape to suffer perhaps for days before death puts an end to its misery. On the other hand it may, with much plausibility, be argued, that this restriction will make a guide do his part of the work—that is, getting the hunter the best possible shot at the game—the more carefully, and will prompt him to discourage taking a very long or a very difficult shot, or one which cannot, in the nature of the case, be made deadly; while the hunter will do the very best he knows when the time comes to shoot.

Apropos of this matter of the attitude of the guide toward the hunter, it is interesting to note that this law declares that "it shall be the duty of every registered guide to prevent any person he is guiding from hunting and killing any more than the number of game authorized to be hunted and killed under the license held by such person, or from hunting or injuring any cow or calf moose, or any cow or calf caribou. Any registered guide who allows any such offense to be committed, or fails immediately to report such offense to the surveyor-general or a chief warden, or allows any non-resident sportsman guilty of such offense to leave the Province before reporting such offense to the surveyor-general, shall be liable to a fine of not more than $100 and also to have his license and his registration as a guide cancelled by the surveyor-general." Also, each guide, "shall, on or before the 31st of December in each and every year, file with the surveyor-general a report of the number of game animals killed during the preceding season by parties he has taken into the woods, showing separately the number of moose, caribou, deer, etc., respectively,

and such other information as may be required by the surveyor-general." It is also definitely provided that "when any person shall have killed any moose or caribou, he shall, in all cases, bring out the head of such moose or caribou, and shall also affix to such head in the most secure manner possible a tag stating the person by whom such moose or caribou was killed, the number of his license and the time and place of such killing, and shall foward a duplicate of such tags to the Crown Land Department. If such head is to be preserved or mounted, such tag shall be kept thereon until delivered, so finally preserved and mounted, to the owner, and no such head, whether preserved and mounted or not, shall be exported from the Province without such tag being attached to it." Furthermore, "no non-resident of the Province shall enter into or upon any woods, forests or wild lands for the purpose of hunting any moose, caribou or deer, without being in charge of a registered guide, and no registered guide shall at the same time guide or be employed by more than two hunters in hunting. Any non-resident or guide violating any of the above provisions shall be liable to a penalty not to exceed $50 and costs for each offence, and be subject to imprisonment for a term not exceeding thirty days."

Thus guides are made responsible for the enforcement of certain of the most vital clauses of this law, and one will not need to know many of them before he will discover that they are aware of these responsibilities and take them seriously. I noticed, for example, that this was the attitude of my guide, Storey, who was unwilling to let me go into the woods alone. In the first place, it was evident that he felt his respon-

sibility for my personal safety, for there is always the danger of getting lost, and every hunter knows that this danger is very real when one is following game, especially if he has wounded the animal and is anxious that it shall not escape. But it was also evident that Storey took into consideration the possibility that I might break the law by shooting a protected animal. Now, I feel pretty certain that I wouldn't make the mistake of shooting a cow moose, but it takes a man who is surer of himself than I am to be confident that, should he see a moose *with antlers*, in a dimly-lighted thicket, he would not shoot until he had made an examination minute enough to determine, beyond peradventure, that it was a bull "at least three (3) years old, having at least three (3) points not less than four (4) inches long on each horn," as the law prescribes. Indeed, I am afraid that the average hunter, under such conditions, would *shoot* first, and *examine* later. But if I had killed an immature bull, it is quite probable that Storey eventually would have been held responsible, if not legally, at any rate morally. For even if one is inclined to do so, it is by no means an easy matter effectually to dispose of the carcass of one of these big animals. If it be buried, the foxes or fishers will dig it up, and most likely, sooner or later, the murder will out.

It is a big country, of course, and sparsely settled; yet the natives, and especially the woodsmen, are apt to be astonishingly familiar with what has happened in those great forests. Each guide hunts in a country the boundaries of which are roughly known, and as a matter of professional courtesy no other guide will hunt in that territory. This custom, it will be seen, has two

consequences; first, it reduces to the irreducible minimum the accidental shooting of hunters (an almost unknown occurrence in New Brunswick); and, secondly, it makes possible the placing—by inference, at least—of responsibility for violations of the game law, accidental or otherwise. I well remember the genuine indignation of Storey upon learning from the young guide who came in to take out our "duffle," that somebody had shot a fine cow moose on the outskirts of Doaktown. The miscreant was unknown, but no one could doubt, after hearing those two woodsmen talk, what would happen to him if he was identified.

This evidently genuine solicitude concerning the big game of the Province seems to be the characteristic mental attitude on this subject of the average New Brunswick guide, and it is a most interesting and significant manifestation of the effects of the law we are now considering. Of course, it would be idle to assert that this law is never transgressed by guides or hunters; human nature is pretty much the same in New Brunswick as elsewhere, and undoubtedly protected animals, or more than the prescribed number of animals, sometimes are killed deliberately. As I have tried to show, however, this can be done only at considerable risk, and, in point of fact, I am persuaded that it happens very rarely in the case of cow moose. But it is also true that respect for the law, and the intention to obey it, are in the air. This condition is doubtless due partly to the fear of the penalties prescribed, but even more, I am convinced, to an intelligent realization of the fact that the enforcement of the law creates conditions which redound to the benefit of the residents of

the Province, whether guides or otherwise. The guides themselves know that they are its chief direct beneficiaries, because it is the means of putting in their way profitable employment for several months every year. I have said nothing about small game and fish, which are also protected; but the open season for big game extends from the 15th of September to the 30th of November, that is, seventy-six days. Most of the registered guides are employed (chiefly by non-resident hunters) practically without intermission during this period, or, say, for seventy days, at $3 a day, with their board; and $210 means a great deal to these men. Many of them, it should be added, manage to do a little trapping while they are guiding, and from this source may add $50 or $75, or even more, to their earnings. Therefore, being sensible men, they know that it behooves them to obey this law, and to see to it that others do likewise. For as long as the game abounds, as it does now, and will indefinitely if the present protection be continued, they are certain of much of this profitable and congenial employment.

Finally, there is the convincing evidence of the importance of the law as a source of revenue for the Province, as set forth in cold figures in the annual reports of the surveyor-general. These figures for fifteen years I am able to present precisely, thanks to the courtesy of Mr. T. B. Loggie, deputy surveyor-general of the Province, who has been at much pains to supply me with the data of which the following tables are composed. In the first of these tables, the "amount paid for license fees," includes non-residents' license fees (as shown in the separate column), the residents'

license fees of $2 (assessed throughout the period), the fees of $1 for guides and camp help, respectively (assessed since 1903) and the non-residents' fees of $10 to shoot deer and game birds (assessed since 1907). The exhibit is as follows:

Year	Non-resident License fees.	Amt. paid for License fees.
1897	$20.00	$1,993.00
1898	20.00	4,711.82
1899	20.00	5,340.66
1900	30.00	8,266.05
1901	30.00	8,711.29
1902	30.00	10,855.95
1903	30.00	16,150.55
1904	30.00	16,216.63
1905	50.00	20,076.81
1906	50.00	27,485.19
1907	50.00	29,054.80
1908	50.00	32,071.60
1909	50.00	33,318.11
1910	50.00	41,140.19
1911	50.00	43,066.36
		$298,468.01

Comment on these statistics seems hardly necessary: they speak for themselves. But I may call attention to a few facts which they present directly, and by inferences. It is to be noted, in the first place, that the amount of these fees received annually has steadily increased (excepting during the hard times—in this country—of 1906-1907), and this is in the face of the fact that meanwhile the amount of the non-resident's fee has been more than doubled. The only sensible inference to be drawn from this is that the game mean-

while has been increasing. Further evidence of this is shown in the following table giving the number of non-residents' licenses issued between 1902 and 1911:

Year	Amt. of fee	No. licenses
1902	$30.00	287
1903	30.00	338
1904	30.00	342
1905	50.00	283
1906	50.00	404
1907	50.00	357
1908	50.00	377
1909	50.00	412
1910	50.00	483
1911	50.00	507

The number of licenses shown in this table represents the number granted to individuals for hunting moose and caribou, plus (from 1907) those shooting deer and small game. The table shows, even more markedly than the preceding one, the effects of the hard times in 1906 and 1907, and in 1910 and 1911, but the fact remains that, excepting these periods, there has been a constant and fairly consistent increase in the number of licenses granted to non-residents. In studying these figures, one should bear in mind that every non-resident hunter not only leaves in the Province the full amount of his license fee but probably, on an average, not less than $100 besides in the way of his guide's hire, plus the amount he spends on his outfit, while many hunters of course leave several times this amount. And it is of passing interest, at least, to note that these hunters have represented almost every nation under the sun, such has become the reputation of New Brunswick as a hunting ground.

The outstanding fact, then, concerning this New Brunswick Game Act, is that *it works;* and to those who know nothing about the conditions existing in the Province before its enactment, its obvious efficiency will seem the more remarkable and significant. For by no means was New Brunswick ever thus in the matter of its game population. Indeed, there was, for a long period, as much ruthless and stupid slaughter of game, both large and small, in the Province as ever disgraced any section of the United States, which is saying much! This was the work of hunters, trappers and lumbermen, resident and non-resident, who, twenty-five years ago, roamed the great forests of the Province, killing indiscriminately and at all seasons all kinds of game. Moose (frequently entire "yards" of them, in winter), caribou and deer were killed by the thousands, *for their skins alone,* and their carcasses left to rot. As the result of this continuous slaughter, according to official reports, these fine animals had been almost completely exterminated by 1888. Then the people of the Province awoke to the situation and began to harken to the protests of certain quixotic sportsmen and visionary public officials, who had long cried out against this heartless and senseless slaughter of creatures which, they averred, could be made a valuable public asset. And so it came about that, in 1888, a close season of three years was declared on all kinds of game animals. Those three years fully vindicated the friends of game protection, for, by 1891, when hunting was again permitted, the moose, caribou and deer had reappeared in the forests in encouraging numbers. Then came the passage of the Game Act in 1893, and thereafter various amend-

ments to it, each adding further restrictions and safeguards for the animals, with the astonishing and gratifying results which I have endeavored to set forth. The moral of it all ought to be sufficiently obvious to all persons who stand for the present protection and the prospective increase of game in the United States.

Tarpon Fishing

By

W. H. GRENFELL

THERE are many kinds of fishing, and many kinds of pleasure to be derived from each variety. It may be found in the actual casting of the line, in the fighting of the fish, in the quiet and seclusion of the occupation, in the character of the scenery, in the exercise of a personal dexterity which it has taken long to acquire, or in the hope of catching something big. In fishing for tarpon the desire of catching something big is certainly present, and it is an important element in the sport. But mere size is not in itself enough. A jew-fish, which may hang on to the unfortunate tarpon-fisher for the greater part of the day, is as heavy as four or more tarpon, but is a subject rather for condolence or a cutting of the line than for congratulation. No—an ideal fish to catch, whether big or small, must be a great fighter. The tarpon fills this bill. He is a reckless and impetuous fighter. He will just as soon come straight at you, and even into your boat, as fly from you. He thus possesses

two great requisites in a sporting fish—size and gameness. Even when he is apparently well hooked, the element of uncertainty, which lends so much pleasurable excitement to fishing generally, is abundantly present.

A tarpon can never be counted yours till he is actually landed. His mouth is so hard and bony that it affords but little purchase for any hook that is not well driven home. Frequently, the exhausted angler sees the hook come away with a last little feeble wag of the head when the round is nearly won. In pass-fishing for tarpon this is the chief cause for the presence of the element of uncertainty, but there are many others. The risk of the line breaking under the great strain which must of necessity be put upon it is greater than in most other forms of fishing, because not only is the line finer in comparison with the weight of the fish, but the salt water and the hot sun act injuriously on the best of lines. Sharks, too, are likely to rob you of your prize in the very moment of victory. In the Boca Grande Pass, off Florida, they abound naturally, and the capture of tarpon also attracts them. They lie in wait for the fish, and when it is nearly exhausted will attack it; and one bite of a large shark will cut the fish in two. The presence of large numbers of sharks in time drives away the tarpon, and places once frequented by them in large numbers become gradually deserted.

There is another attraction about the tarpon, which lies in the fact that he shows himself, and shows himself with no little violence, and a fish that jumps is always more exciting than one that does not. There are few finer sights in angling than the first mad

leaps of the tarpon; like a bar of burnished silver, whence he gets his name of "Silver King," he flings himself high into the air, and with vigorous shakes of his great body tries to cast away the restraining hook, which he too often succeeds in doing. When a tarpon jumps you must hold on to him, and not lower the rod or slack the line as is the case in salmon fishing; the reason being that unless the strain on the line is kept up, the hook will lose its hold, which, as a rule, is not a very secure one. In fact, so hard and so well protected by bony layers is the tarpon's mouth that for some time it was considered impenetrable to the hook, and it was not until the proper tackle had been invented that any success attended efforts to land the fish; unless, indeed, he had swallowed the bait well down, in which case a firm hold could be obtained in a softer portion of his anatomy. But still-fishing for tarpon has to a great extent died out. I have never practised it myself, but from all accounts it was not a very exhilarating pastime, and it was always full of disappointments. The plan was to moor the boat in some likely spot, cast the bait out some distance from you, and let it lie on the bottom. When the line began to move, it was paid out, or allowed to run out from coils at the bottom of the boat, so that the fish should have time to swallow the bait before he was struck. The advantage of this system consists in the fact that when hooked the fish has much less chance of getting off; but the disappointments are innumerable, as the waits are long and dreary, and when at last the line moves it is owing not to the lordly tarpon but to some small shark, catfish, crab, or other insignificant robber of the sea.

Photo by C. J. Greenleaf

A FRESHENING BREEZE

Photo by C. J. Greenleaf

THE BOW RIVER VALLEY, BRITISH COLUMBIA

In pass-fishing, when the boats are not too numerous, there is opportunity for movement as well as for the exercise of a greater amount of skill in the change of bait, in working it, in finding by experience the best depth at which to fish on different days, and in playing the fish itself. A fish hooked in the mouth will give much more sport in the sea than a fish hooked in some more vital place will do in fresh water, where still-fishing used to be carried on; and he will be more difficult to land, as, the hold being less secure, any slackness in the line is usually punished by the escape of the fish. Playing a big tarpon is certainly a sensation which should be experienced by anglers who have the opportunity, and it is not a very difficult one to acquire. Edward Vom Hofe, of New York, can supply not only the requisite rods, lines and hooks, but also the latest information as regards boats and further accommodation to be obtained at Boca Grande or other passes frequented by tarpon. A large supply of hooks should be taken, as these get twisted and blunted by the heavy, hard-mouthed fish, and frequently are lost through breakage arising from various causes. A dozen lines, three reels and three strong rods should also form part of the equipment. The reels should be of the best quality, as otherwise they soon come to grief, owing to the frightful strain that is put upon them, and the rods should be made of the toughest wood procurable. Bamboo rods I find to be of little service; four I once had with me I broke in one morning, while on one tough iron-wood rod, I landed ninety out of a hundred tarpon I was fortunate enough to catch in the Boca Grande Pass.

The attraction of tarpon fishing lies primarily in

the great struggle with the big fish, and to prepare for this struggle it is as well, if possible, to exercise those muscles which will be called into play before engaging the fish himself. The first tarpon will probably cause more exhaustion than a dozen or more caught in a single day when the muscles required have become hardened and skill has been added by experience. Although another and still larger fish, the so-called flying tuna, can be caught off Santa Catalina, on the coast of California, it is doubtful whether it shows such sport as the great game-fish of the Gulf of Mexico. Its nature is more timid and its method more monotonous, consisting in straight runs away from its would-be captor, unvaried by the great leaps and impetuous antics of the tarpon, which invariably supply a strong element of the unexpected. Until a new sporting fish is found I think the tarpon in the sea, as the salmon in fresh water, can still claim to be the most exciting quarry of the angler with the rod and line. My best fight was with a fish that I had foul-hooked in the middle of the back. It towed my boat out to sea, and was on the hook just an hour and a half, but I got it into the boat at last.

Thoughts on Trout-Fishing

By

CHARLES BRADFORD

HOW TO CARRY THE ROD.—Joint your rod only when you reach the place for angling, and take it apart again when you are ready to leave the water for camp, unless the camp is on the edge of the lake or stream where you fish. When fishing along thickly-wooded banks, carry the rod in front of you, tip first; never pull it after you. Fasten the hook on one of the reel bars, and then thrust the rod's tip through the branches or shrubbery ahead of you when you move along, casting here and there. This is not necessary when one only moves a step or two, for then, if there be open space, the rod and line may be held clear of the underbrush and branches. In all cases keep the rod ahead of you.

UP AND DOWN STREAM.—English anglers sometimes wade up a stream and some anglers in this country, in order to be English, or foolish, affect the same ridiculous proceeding. Still there is *some* reason in this man-

ner of wading on the part of the old country's anglers, because where they practice it the water is quiet and not altogether shallow. Here, where our trout streams are rapid and foaming as they rush along, it is simply out of the question to wade up them. The walking is bad, you become wet, the fish see you, your flies drift toward you, your line is slack all the time and the flies sink too often, and altogether you spoil the chances of creeling whatever may be takable in the water. On still, barely-flowing, deep waters, a line may be cast in any direction.

COLORS OF TROUT.—The color of a trout's back depends on the color of the bottom of the river, but the trout which grow rapidly differ greatly in spots and color from those which grow slowly and thrive badly, and a middle-aged trout differs in color from an aged trout. Speaking generally, the young, healthy, fast-growing fish will have silvery sides, white belly, and plenty of well-defined spots. The poorly fed fish will have few or no spots, a drab belly, and muddy-yellow sides. The old trout will be particularly lank and large-headed.

ANGLER VS. POTSTER.—Trout in the creel or no trout in the creel, the truly gentle angler never complains of poor sport if there be trout in the water he fishes, if the weather be pleasant and the scenery fair. Some anglers—or rather pot fishermen—judge their day by the actual slaughter of fish. The true rodster loves the pursuit and capture of the fish, the bright day and the beautiful natural surroundings equally well.

THOUGHTS ON TROUT-FISHING

VARIETY.—You can never carry too many trout flies on your trip. Fill your fly-book and stick them all over the crown of your hat besides. Trout do not like the same fly at all times any more than you are fond of feeding on one sort of meat.

TROUTING OUTFIT.—Here's a plain, practical reasonable-price outfit with no unnecessary items: A four-ounce lancewood fly rod, a common rubber click reel to hold twenty-five yards of fine waterproof silk line, a seventy-five-cent cane landing-net, small and with no metal on it, a seventy-five-cent creel, a dozen of the best made and highest priced assorted trout-flies, a pair of waders, and a dollar's worth of the finest and best made silk gut leaders.

ALL-TIME FLIES.—For the young angler who does not care to go into the study of artificial trout flies and their seasons I will give here a list that may be used at all times, during legal seasons, and on all waters: Alder, gray and green palmer, ginger palmer, March brown, Reuben wood, professor, white miller, coachman, royal coachman, codun, scarlet ibis, dark coachman, brown and red palmer, grizzly king, queen of the water, king of the water, brown hen, and black-gnat. Early in the season use hooks from No. 6 to 8; later No. 8 to 12. Use the small ones on streams and the large ones on lakes and rough waters; and, as I have previously remarked, when the day is bright and where the water is clear, use the small patterns of plain colors; on dark days and in the evening, use the large bright flies.

BUY YOUR TACKLE.—The old anglers tied their flies themselves, and, in fact, made all their rods and tackle save, perhaps, lines. Today, few anglers think of tying flies or preparing any tackle, owing to the expertness and moderate terms on the part of dealers. It is much cheaper to buy tackle outright as it is to buy gun shells ready loaded.

KNIFE AND SHEARS.—A small pair of scissors attached to a string and fastened to the angler's coat are most useful companions along the stream. They are much more easily operated than a knife; they save time, and while one may do with them nearly all that can be done with the knife, they will render a service that cannot be obtained from the single blade. A knife should always be carried, nevertheless, and the proper one for the trout angler is that newly-invented thing which requires no finger-nail work and which is made ready for service by a mere pressure of the thumb on the top of the handle.

Items of Interest

During the last few years the New York Sporting Goods Company has been coming to the front with an extremely diversified line of sportsmen's specialties of good quality and at moderate prices. Their catalogue has been greatly increased in scope and attractiveness until it is now one of the most thorough and interesting that come to our desk.

The business of the New York Sporting Goods Company and the literature that it sends out are both marked with the personality of its President, Mr. Powhatan R. Robinson—who by the way claims lineal descent from Princess Pocahontas. Mr. Robinson is himself a practical sportsman and an extensive traveller; and he is thoroughly bent on giving to his customers every service in his power in the way of suggestion and advice. Sportsmen who visit the New York Sporting Goods Company shop at 17 Warren Street will be able not only to see the latest wrinkles in outfit, but also to obtain up-to-date information in regard to hunting, fishing, and camping grounds.

The best known painter of American big game is beyond peradventure Carl Rungius, whose canvasses

have been hung in the Metropolitan Museum of Art, and who is so widely known among the outdoor fraternity, especially for his moose studies.

Of German birth, he began his career as an artist in Berlin, but in 1894 he came to the United States, where he has since made his home. Rungius is just beginning to come into his own, and already his work is much sought after by collectors and galleries. It may be said of his moose pictures that for fidelity and power they are altogether in a class by themselves. It gives us great pleasure to reproduce one of them as a frontispiece to our present issue.

The great English firm of Burroughs, Wellcome & Co. which maintains a large branch house in New York City, has put into the hands of campers a large number of most serviceable articles. Their First Aid Kits, of which there are many different sizes and styles, have become the standard of the world. They enable the camper in the far backwoods to have at his disposal the most modern and effective equipment.

Undoubtedly campers also know of the Tabloid Tea, which comes in packages of one or two hundred each, two of the tablets being sufficient to make an excellent cup of high-grade beverage. With this may be used their Saxin Tablets, the best sugar substitute known. This is six hundred times as sweet as sugar, and one of the small tablets is equivalent to a regular lump of loaf-sugar. These tablets come packed one hundred in a small vial.

Among the most ingenious cameras in point of construction are the "Pocket" and "Miniature" Icas, em-

bracing a line of the most efficient and practical small cameras that have ever been made.

The small camera has many decided advantages, upon the details of which it is not necessary to dwell here. It is claimed for it that pictures made with a small lens have greater depth than those made with a large; that with a small camera you may stop motion with a longer exposure than with a large camera; that enlargements properly made from small pictures retain the depth of the original, and that the operating cost is decidedly less.

Those who are unable to obtain an Ica camera from their regular dealer should correspond with the International Photo Sales Corporation, 235 5th Avenue, New York City, from whom they may obtain full instructions.

No other rifle lends itself to so varied uses as does the .22 calibre repeater. It is the gun that most shooters begin with and it is quite sure to be one of the veteran shooter's favorites throughout his years of hunting. The .22 may be depended upon for the killing of duck, partridge, and the general run of birds and small mammals that largely make up the camper's sustenance and the one-day hunter's bag. Its minor report is also an advantage in regions where a louder explosion would frighten the big game that might present an opportunity for a larger rifle. Then the .22 is a continual joy in camp on the rainy days that never fail to come, when target practice helps to keep one's shooting sense keen and ready for the big game arm.

In the small rifle field, the highest development in a .22 calibre weapon is the Remington-UMC repeater.

This is a strong and simple gun with many exclusive points of excellence. It is, first of all, perfectly safe—being hammerless; it has a solid breech, preventing clogging of the action and possible damage from foreign substances; its magazine accommodates .22 short, .22 long and .22 long rifle cartridges, indiscriminately, and its barrel is expertly rifled to shoot all three sizes with equal accuracy and facility.

To make your camping equipment complete—for food getting or for pleasure—there is no one article that can be "packed" along with greater profit than a Remington-UMC .22 Repeater.

There are now more small cameras upon the market than ever before. Convenience and compactness are being more and more sought without sacrifice of efficiency.

Just how far practical modern cameras have been reduced in size may be somewhat indicated by mention of the fact that the "Vest Pocket Tenax," the product of the Goerz Optical Company of New York and London, measures when closed only 3½ x 2¾ inches by 1 inch, and weighs only eleven ounces.

The Tenax is made for time and instantaneous exposures, and uses either plates or films. It gives accurate exposures of ½, 1-10, 1-25, 1-75 and 1-100 of a second. When opened the camera is automatically set at sharp focus to infinity—which in this case is about thirteen feet. A focusing dial enables the operator to obtain automatic focus for all objects from twelve feet to infinity. The Tenax may be used on an ordinary tripod, if desired. The Tenax nega-

tive is 1¾ x 2 5-16 inches in size, but an automatic enlarger may be obtained, which gives results of fine quality.

There is living in Michigan a man who has invented no less than forty-seven (47) different specialties for the use of campers and sportsmen.. These inventions are the outgrowth of more than twenty-five years of practical experience as timber prospector, surveyor, and hunter. Many of his useful contrivances are carried by sportsmen in every part of the world. The Marble Arms & Manufacturing Company of Gladstone, Michigan, of which he is head, manufactures no less than sixty (60) different items for the equipment of the outdoor man. Among the most widely popular of all are a match-safe, hunting knife, and safety hatchet. All of the Marble goods that we have seen are neatly fashioned, substantial and dependable. The makers seem always to have had in mind the fact that the comfort and safety of the camper are not infrequently due to the care with which some possibly minor portion of his outfit has been manufactured.

The Berlin Aniline Works, 213 Water Street, New York, are importing a new photographic developer that promises to become a prime favorite among the camping fraternity. One of the chief attractions of this developer is the compact, waterproof tube in which it is sold. The contents is preserved free from injury or deterioration; and at the same time is handled far more advantageously than it would be from an unwieldy package. We refer to what is known as the

"M. Q." Developer. It has been sold successfully in Germany, and is now being introduced here. Each tube contains carefully compounded chemicals to be dissolved in ten (10) ounces of water. This developer is adapted for use with all photographic papers, films and plates.

Some of the most interesting fire-arms advertising that it has been our privilege to see, is that put out by the Ithaca Gun Company of Ithaca, New York, whose most recent catalogue described eighteen (18) different grades of guns, ranging in price from $17.75 to $400.00.

Ithaca guns have long been distinguished for the scientific accuracy of their manufacture, and the thorough tests to which they are subjected. Take for example the speed of their lock. This is perhaps a matter of more importance to trap-shooters than to campers and hunters; yet in the field, too, the speed of the trigger is an important feature, and a fast lock is of service to the huntsman in the case of flying birds.

The Ithaca people at this time are especially featuring their twenty-eight and twenty bore guns, the twenty-eight bore weighing from 4¾ to 5¼ pounds and the twenty bore weighing 5¼ pounds. Those particular campers who believe in having the mechanism of their gun made with no less care than that of their watch would do well to investigate the offerings of the Ithaca Company.

The well-known Baker guns have been on the market since 1885, being first manufactured at Syracuse, N. Y., from which place the factory was removed to Batavia,

N. Y., where a larger and fully equipped plant was established about 1890. While the first models were fully up to the time of their development, changes and new models have been made from time to time in order to keep the line fully abreast with changing conditions and requirements.

In recent years the Batavia line has been brought out to supply the requirements for reliable hammerless guns of sterling service qualities at lower prices. These models are quite similar to the Baker models but with some slight modifications and without so high a degree of finish.

A single barrel trap gun is the latest addition to the Baker line. This model is furnished in three high grades designated as the "Superba," "Elite" and "Sterling." These are built mostly to special order and are in high favor with shooters, who find in this arm the most effective implement for the special purpose of trap shooting.

In order to save time, and thinking to obtain better results, many campers, instead of doing their own photographic printing and developing, entrust to professionals their choicest films. Unfortunately most photographers and camera-shops execute such orders in a wholly commercial and perfunctory spirit. You expect to have each picture treated individually, so that its best points may be brought out. When the professional gives you unsatisfactory results he assures you that they are due to your own want of judgment and experience. As a matter of fact, careful developing and printing may be the salvation of even poor films.

This is the opinion of such experts as Burgess and Hutcheon, of No. 207 Kearny Avenue, Kearny, N. J. Amateurs will find that these gentlemen devote their personal attention to each film and print.

"Hammer the Hammer" has become one of the most familiar of advertising slogans. Almost every sportsman knows that it refers to the famous Iver-Johnson Hammerless Revolver, whose perfect safety action especially commends it to campers. The Iver-Johnson people are constantly making improvements and adding new models.

This arm is made for five, six, and seven shots in twenty-two, thirty-two, and thirty-eight calibre with barrels ranging from two to six inches. It is solid and substantial in construction, and handsome in finish. As is well known this gun cannot be fired without pulling the trigger. Another point of superiority claimed by the Iver-Johnson Company for its product is the use throughout of drawn tempered wire springs. The Iver-Johnson output also includes Automatic Hammer Revolvers and Single-Barreled Shot Guns.

A handsome illustrated catalogue will be sent by the company on application to the general offices at Fitchburg, Mass., the New York branch at 99 Chambers Street, or the San Francisco branch at 717 Market Street.

Every camper who has used the Stonebridge Folding Lantern has nothing but praise for its many excellent qualities. As a matter of fact, it is the only satisfactory

solution of the problem of artificial lighting for the travelling party. By day it may be carried compactly folded in a leather case. At night it may be very quickly adjusted; and it will furnish adequate illumination for camp duties or for a bit of reading before one turns in. Its weight is extremely slight, and it will burn steadily in high winds. The old-fashioned non-collapsible lantern is one of the most awkward things to carry imaginable, and a candle stuck on a stick is extinguished by a slight puff of air. A blazing knot, picturesque though it be, cannot be used inside a tent. The Stonebridge is everywhere available and practical.

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